THE INLAND ARCHITECT AND NEWS RECORD.
Vol. XI. No. 7

JUNE, 1888.

THE INLAND ARCHITECT
AND NEWS RECORD.

A Monthly Journal (with an Intermediate News Number) Devoted to

ARCHITECTURE,

Construction, Decoration and Furnishing

IN THE WEST.

TERMS: Regular number, $3 a year; Photogravure edition, $8 a year. Single copies: Regular number, 25c.; Photogravure edition (including 5 photogravures), 75c. Intermediate number 10c. Advance payment required.

L. MULLER, Jr., Manager. R. C. McLEAN, Managing Editor.
C. E. ILLSLEY, Associate Editor.

PUBLISHED BY THE INLAND PUBLISHING CO.
19 TRIBUNE BUILDING, CHICAGO, ILL.

SPECIAL CONTRIBUTORS:

JOHN W. ROOT,	WM. PAUL GERHARD,	W. L. B. JENNEY,
BENEZETTE WILLIAMS,	P. B. WIGHT,	IRVING K. POND,
D. H. BURNHAM,	LOUIS H. SULLIVAN,	ALLEN B. POND.

WESTERN ASSOCIATION OF ARCHITECTS.

OFFICERS FOR 1888.

PRESIDENT . . . . . SIDNEY SMITH, Omaha, Neb.
SECRETARY . . . . . NORMAND S. PATTON, Chicago, Ill.
TREASURER . . . . . SAMUEL A. TREAT, Chicago, Ill.

VICE-PRESIDENTS:

First Vice-President . . . JAMES F. ALEXANDER, La Fayette, Ind.
Second Vice-President . . WILLIAM C. SMITH, Nashville, Tenn.

BOARD OF DIRECTORS:

JOHN W. ROOT, Chicago, Ill., *Chairman.*
WALTER R. FORBUSH, Cincinnati, O. C. F. SCHWEINFURTH, Cleveland, O.
J. J. FLANDERS, Chicago, Ill. GEORGE B. FERRY, Milwaukee, Wis.

STANDING COMMITTEES FOR 1887.

Committee on Discipline—The Board of Directors of the Western Association.

Committee on Metric System—N. S. Patton, Chicago, chairman; J. J. Flanders, Chicago; F. S. Allen, Joliet, Ill.

Committee on a Code of Ethics for Professional Practice—Special sub-committee of three in each state.—L. H. Sullivan, Chicago, chairman.

Committee on Uniform Contracts and Specifications—S. A. Treat, Chicago, chairman; J. F. Alexander, La Fayette, Ind.; W. R. Forbush, Cincinnati, Ohio.

Committee on Procuring Architectural Drawings and Photographs for Exhibition at the next Convention of the Western Association—The Board of Directors of the Western Association.

Committee on Bill Governing Office of Supervising Architect of U. S. Treasury Department—Dankmar Adler, Chicago, chairman; D. H. Burnham, Chicago; J. F. Alexander, La Fayette, Ind.

Committee on Consolidation of the Architectural Societies of America—Dankmar Adler, Chicago, chairman; G. B. Ferry, Milwaukee; W. W. Carlin, Buffalo; A. Van Brunt, Kansas City; John W. Root, Chicago.

Committee on Collection of Statistics on Competitions—C. E. Illsley, St. Louis, Mo.; G. W. Field, Omaha, Neb.; E. H. Taylor, Cedar Rapids, Iowa; G. W. Rapp, Cincinnati, Ohio; J. W. Yost, Columbus, Ohio.

Committee to Organize State Associations—Jas. F. Alexander, La Fayette, Ind.; H. P. McDonald, Louisville, Ky.; Geo. W. Thompson, Nashville, Tenn.; J. G. Haskell, Topeka, Kas.; F. C. Bruce, Atlanta, Ga.; John Sutcliffe, Birmingham, Ala.; E. W. Welles, Wheeling, W. Va.

Committee on Statutory Revision—Dankmar Adler, Chicago, Ill.; Geo. L. Fisher, Omaha, Neb.; F. G. Corser, Minneapolis, Minn.; E. H. Taylor, Cedar Rapids, Iowa; E. O. Fallis, Toledo, Ohio; Albert Cobby, Yankton, Dakota; Charles K. Ramsey, St. Louis, Mo.; John M. Donaldson, Detroit, Mich.; C. A. Curtin, Louisville, Ky.; Geo. B. Ferry, Milwaukee, Wis.; James F. Alexander, Lafayette, Ind.

Committee to Collect Legal Decisions Relating to Building Interests—Missouri: Chas. C. Helmers, Jr., St. Louis, chairman; Adriance Van Brunt, Kansas City; T. B. Annan, St. Louis. Kentucky: C. A. Curtin, Louisville; H. P. McDonald, Louisville; Mason Maury, Louisville. Tennessee: Wm. C. Smith, Nashville; Joseph F. Baumann, Knoxville; Chas. C. Burk, Memphis. Minnesota: F. G. Corser, Minneapolis; G. M. Goodwin, Minneapolis; D. W. Millard, St. Paul. Texas: S. A. J. Preston, Austin; James J. Kane, Forth Worth; N. J. Clayton, Galveston. Nebraska: G. L. Fisher, Omaha; Geo. W. Field, Omaha; Louis L. Mendelshon, Omaha. Michigan: John M. Donaldson, Detroit; Dillon P. Clark, West Bay City; Jack Rice, Detroit. Illinois: Fred Baumann, Chicago; R. C. Berlin, Chicago; Wm. Holabird, Chicago. Indiana: B. Vonnegut, Indianapolis; J. W. Reed, Evansville; J. F. Wing, Fort Wayne. Ohio: J. W. Yost, Columbus; E. O. Fallis, Toledo; S. E. Des Jardins, Cincinnati. Kansas: J. G. Haskell, Topeka; E. T. Carr, Leavenworth; A. W. Haywood, Wichita. Wisconsin: Geo. B. Ferry, Milwaukee; H. C. Class, Milwaukee; W. A. Holbrook, Milwaukee. Iowa: E. H. Taylor, Cedar Rapids; F. D. Hyde, Dubuque; E. S. Hammatt, Davenport. Georgia: F. C. Bruce, Atlanta; A. M. Macmurphy, Augusta; F. C. Morgan, Atlanta. New York: W. W. Carlin, Buffalo; Louise Bethune, Buffalo; J. G. Cutler, Rochester. Dakota: Albert E. Cobby, Yankton. California: Eugene L. Calkins, Los Angeles. Louisiana: Thomas Sully, New Orleans. Wyoming: J. S. Mathews.

A MEETING of the Board of Directors of the Western Association of Architects, was held at Chicago, May 30. There were present: Secretary N. S. Patton; Chairman John W. Root, George B. Ferry, Walter R. Forbush, and J. J. Flanders. It was decided to issue a certificate of membership to architects in good standing for the current year. An amendment to Article XII of the by-laws will be submitted to the next convention, providing that all committee meetings involving expense to the association must be approved by the Board of Directors, who shall determine the proper allowance for expenses. The board passed a resolution indorsing the action of the American Institute of Architects in regard to the bill now before congress, calling for the payment of money due the estate of the late Thomas U. Walter, for services rendered the government in the construction of the Capitol building. A large amount of minor matters occupied the remainder of the session.

ARCHITECT Charles A. Alexander, of Chicago, died at New York, May 21. Mr. Alexander was an Englishman by birth, and though he practiced his profession in Chicago for sixteen or eighteen years, he was comparatively little known to his brother architects, as in disposition he was extremely reserved. Of his work there are several good examples in Chicago, such as the residences of Wirt Dexter, T. W. Harvey, Edwin Walker, and that of Mr. Huntington, northwest corner of Michigan avenue and Sixteenth street. His practice also extended over the West and South, and was scholarly and effective, showing close study and considerable architectural talent.

THE death of General Q. A. Gilmore, one of the most celebrated civil engineers of the age, closes a life that has been more or less closely connected with much of the vast progress that has taken place in this country during the past thirty years, and no history of our engineering achievements can be written in which the bright intellect of that gentleman is not conspicuous. As an author, General Gilmore was no less active. He was one of those earnest and industrious spirits whose whole efforts were bent on increasing the real knowledge of the world. His investigations have added much to our knowledge of limes, and of the strength of stones, bricks, etc. He spared no pains in doing his work well, and, like all really valuable original work, the labor of months, if not of years, could be expressed in a few pages. Someone has written that the crying necessity of the hour is a society for the suppression of useless knowledge. Whether this be so or not, there is scarcely a doubt but that a society for the suppression of useless books is greatly needed. It has become too much the habit for persons who have made no investigations, experiments, or even thoroughly understood a subject, to air their ideas in print, and to imagine that they have done the public some service, whereas they have only added to its difficulties. Everyone who has accumulated any number of books on a subject learns that the larger number of them might be readily dispensed with, since their authors have made no original investigations, and have therefore added nothing to the knowledge of the subject, but rather have helped to encumber the ground and made it more difficult to ascertain the truth. It may well be said that anyone who now writes without having something original to say, is guilty of a crime. General Gilmore was an original investigator, sparing no pains to attain accurate and definite information on the subject under consideration. He may well be taken by young men as an example worthy of being followed.

A LETTER which should receive general recognition, and the consideration of architects, has been sent out by Architects Charles Crapsey and H. E. Siter, of Cincinnati, the committee appointed by the Cincinnati Centennial Exposition managers to take charge of an architectural exhibit. The letter is as follows:

DEAR SIR,—The undersigned have been appointed by the commissioners of the Cincinnati Centennial Exposition as a committee to secure an architectural exhibit, and this exposition will afford an opportunity to the profession of showing a great multitude of people from various states what is being done in the way of modern building. The fine exhibit that was made by the Western Association in this city, last November, did much toward advancing the profession in the eyes of the general public, and the coming exposition will afford greatly increased means of furthering the same ends.

The express charges, both to and from the exposition, will be paid by the commissioners; the drawings will be handled with the greatest care, and the best judgment of the committee will be used in making a proper display. If you favor this enterprise, and will become a party to the same, a postal card addressed to the chairman of the committee will place your name on the list for future circulars.

Very respectfully,
CHAS. CRAPSEY,
H. E. SITER,
Committee on Plans.

Box 776.

That architects can benefit the profession by placing before the public what is best in design is beyond question, and every opportunity of this kind should be made use of for public education. It is largely through this ignorance of the public in regard to what is correct and tasteful in design, that has given to this country so much that is mediocre or worse in the way of design, for if the public would not accept that which violated all principles of architectural design, let alone good taste, the designer would feel called upon to educate himself, and the character of our structures, both public and private, would be greatly advanced. The public would learn that because a building did not involve a large sum in construction it need not necessarily be badly designed, and mere business talent would not hold so large a place in successful practice as at present. One thing that should be guarded against by the committee in charge of the exhibit is any attempt to use this exhibit as an advertisement, and a selection of the designs sent in should be made so that nothing but creditable work would receive a place in the exhibit. We thoroughly indorse the enterprise, which cannot fail, in the hands of architects of the professional standing of the committee, to be in every way creditable if a thorough support is received by them from the members of the architectural profession.

AT the suggestion of the Buffalo Architectural Sketch Club, the different clubs of architectural draftsmen are contemplating the formation of a league by which the different clubs could enter into general competitions, encourage the formation of new clubs, and, in a general way, advance the interests of draftsmen. While the work of local clubs has been very satisfactory and prolific of good to the members, and they will continue to increase in numbers and value, the time seems to have come when this influence should be, and with wise management can be, extended. Already closely connected through fraternal sympathy, the formation of a general society would make the interest and mutual aid more definite. Club drawings could be exchanged; club competitions could be broadened, until each club in the league would work upon the same subject, and the honor of being most successful among the draftsmen of the country rather than of a city, stimulate the members to greater action, and the production of more carefully studied, and generally creditable work. The relations between architects and draftsmen are too close for such a combination ever to have any bearing upon the business aspect of a draftsman's life except as it may give him greater proficiency. Rightly managed, there are possibilities to a more extended usefulness, which, though limited, can give draftsmen opportunities that the local club cannot. It is also true that the personnel of the local club must still be preserved, and never through assimilation lose in strength or purpose.

THE joint committee upon a uniform system of contracts, composed of three members each of the American Institute of Architects, the Western Association of Architects, and the National Association of Builders, met at New York, June 6. Though this committee is still in session as we go to press, there is little doubt of the result. This system was formulated by a committee of the National Association of Builders, indorsed by it at the last convention, and generally discussed and indorsed by the different builders' exchanges since. Its provisions are in the main equitable, and it seems to us that the only point upon which a wide diversity of opinion may exist will be in a clause protesting against the architect being the sole arbitrator and interpreter of the contract. This will be insisted upon by the architects, and will have to stand as it has in the past. It can scarcely be modified, as the architect stands between the contractor and the owner, and while acting as the latter's agent is still bound to see that the contractor receives full justice. The only recourse from this is a permanent board of arbitration, to which all differences between architect and contractor can be referred and adjusted, and we doubt if the majority of architects would consent to even this modification. The members of the committees are selected from among the best men in their respective associations, and the result of their deliberations will be certain to meet with general approval.

AT last the competition for a court house and city hall at Minneapolis, Minnesota, has probably been definitely decided. Almost a year ago we published the competition circular issued by the board of nine commissioners, and the progress of the competition has been reported from time to time since. After some time spent in trying to arrive at a decision, the commissioners called to their aid Architect W. W. Boyington, of Chicago, who selected five designs. This was not final, however, and since then, as the newspaper report naively remarks, "the contest between the friends of these five plans has been quite a bitter one." At a meeting of the board of commissioners, June 5, a final vote was taken, one of the two designs by Architects Long & Kees, of Minneapolis, being awarded the first prize by a majority of the commission, the chairman, General Washburn, voting in the negative, stating his wish "to go on record as voting against a design that had been ignored by the expert employed by the commission." The second prize was given to W. H. Dennis & Co., of Minneapolis; third to M. E. Bell, of Chicago; fourth to Alexander Murrie, of Minneapolis; and fifth to Orff Brothers, of Minneapolis. It was voted to make Long & Kees the architects of the building, provided satisfactory arrangements can be made. According to the terms of the competition these five designs now belong to the county, and it is entirely optional with the commission who shall carry out the work or which design shall be used.

THE business side of the profession has never, perhaps, in the architectural history of this country, presented itself quite so strongly as in this competition. It was a "business" competition from the start. The commissioners, in a business way, advertised that they would buy plans. Twenty-three architects, and at least half of them of more than average professional ability, presented plans for sale, and the public were called in to see the artistically tendered perspectives and pronounce upon their respective merits. Like business men, as more than one of the competitors admitted to us, they entered the competition relying more upon the influence they might bring to bear upon the commissioners than upon their ability as architects. Of course they would

present as fine a quality of goods as possible, but they understood from the start that it was their "business" ability which should carry them through to victory if they were successful; and though the competition closed in February, the decision has just been made. The Minneapolis papers have reported progress from time to time. Now A was said to have a majority of votes, but the next day B would seem to have captured one or two more, and so the matter stood until a Napoleon of architectural business tactics might appear and secure a working majority. Now that this is decided it remains for both the victor and his competitors to figure the expense and ascertain if entering such a competition pays. There is no other honor in winning the competition than the purely business one. Art has not been considered, except when an architect was called in to select the five best designs, and his decision being from an architectural standpoint, and not a business one, was thrown aside. Any one of half a dozen of the designs would have made a suitable building, as far as the unprofessional commissioners could judge, and therefore the victor cannot claim that the excellence of his design had much, if anything, to do with the award. If architects will look into the history of this competition it may keep them out of many such, and save both their professional dignity and their cash.

IT is becoming more evident, as time passes, that the general efficiency of architectural associations can be increased by the establishment in each large city of an architectural headquarters or club rooms. This is especially true from a social standpoint. The draftsmen have recognized the fact, and some very attractive quarters have been fitted up by different clubs, and the result has been not only an increase in membership, but a larger attendance at regular meetings.

Photography in Architecture.*

PART VIII.—BY FRED D. FOSS.

SINCE writing the last article various other experiments have been made with hydrochinone as a developing agent, which not only substantiates the good opinion already formed of that chemical by the numerous experimenters, but places it in the front rank of developing agents, and when more workers in the art turn their attention to it and learn its excellent qualities it will undoubtedly come into general use. A more extended use of hydrochinone will create a demand that will be met by the manufacturing chemists, and the price, which is now considered high, will be greatly reduced. The cost of hydrochinone is very small compared to other developers, when you take into consideration the number of times it can be used without losing its good qualities. Some of this developer made three months ago is in use today, with as good effect as when freshly mixed. In explaining the peculiar power of hydrochinone one cannot do better than to quote from a paper presented before the photographers' convention by C. E. Van Sothen, last year. "The various possible, and alas! oftentimes also nearly impossible, forms of developers which, from the first practical application of the gelatine dry-plate process up to the present day, have from time to time been brought forward would fill many a page of photographic literature, and upon the experimental photographer has devolved the task of learning from careful and practical tests the characteristic qualities of each individual formula; of determining the amount of advantage gained from applying the one or the other, simple or modified, to certain special purposes; and of deducing therefrom the relative value as to general or special usefulness of the many different mixtures and components. The work, though highly interesting, has been arduous and difficult. A golden kernel of wheat has been brought to light out of an abundance of worthless chaff, and too much praise cannot be bestowed upon such men as Captain Abney, Dr. Eder, Carey Lee and many others for the invaluable services which, through their untiring energy in the field of photo-chemical research, they have rendered to our profession. Yet, with all due appreciation of these scientific investigations, and many valuable discoveries to which they have led, it appears to me that no line of research in photographic chemistry has brought less tangible benefit to the practical photographer than the dry-plate developers; ferrous oxalate and alkaline pyro, in more or less modified form, being today, as they were five years ago, the only reducing agents in practical use with more than nine-five per cent of all the photographers on the globe.

"Here, then, seems to be a chance for the introduction of something comparatively new, and on that ground I hope to be pardoned for bringing to the notice of this convention a developing agent which, though photographic journals have once or twice mentioned it, and its name is undoubtedly familiar to many, is actually so very little known that a few words in its favor may perhaps tend to bring it into more general use, and eventually gain for it the appreciation which it so highly deserves. Hydrochinone ($C_6 H_4, O H_2$), a derivative of cinchonin, is an hydrocarbon of a composition similar to that of pyrogallic acid ($C_6 H_3, O H_3$) and its proportions also bear a strong resemblance to those of this, our most important oxidizer. Its capacity as an oxygen absorber is even greater than that of pyro, the comparative energy of my normal developers being as nine to seven in favor of hydrochinone. But this affinity for oxygen is not as greedy as that of pyro, and its action is therefore less violent and under better control, and in this property of applying its great reducing force slowly, gradually, without unnecessary waste, and without exhausting its strength from the outset, I find the chief advantage of hydrochinone over pyro. Its developing action, as said before, is necessarily slower, but on account of the great constancy of its reducing power, marvelously effective; every molecule of the exposed film, no matter how feeble the impact of light, having to submit in due time to its persistent and apparently untiring energy. Its keeping qualities too, whether in stock solution or mixed developer, are excellent. I have a case on record when with six ounces o developer, containing thirty-six grains of hydrochinone, I developed 5 by 8 plates, transparencies and line-work negatives, without any addition whatever, by merely increasing the time in the camera, after which the mixture was bottled and served as an excellent "starter" for subsequent exposures. A rubber-stoppered beer bottle full of the stock solution, put up on January 5, 1887, and kept in the dark room at a temperature varying from fifty to ninety degrees Fahrenheit, is today (September 9, 1887) almost colorless, and as good as when freshly mixed. Hydrochinone is but sparingly soluble in cold water, fifteen grains per ounce being about a saturated solution, but this is amply sufficient for practical use. Another excellent quality of hydrochinone is the beautiful tone of its deposit; a fine velvety engraving black, and a magnificent clearness of shadows, which for transparencies, lantern slides and line-work negatives especially, is unequaled by any other developer. Alum and restrainer are unnecessary. The addition of bromide changes the tone to a rich brown, but it should be made very cautiously, as the addition of a few drops of a ten per cent solution will exercise quite a perceptible retarding action and render the mixture rather unfit for future use. A few drops of a one per cent solution of hyposulphite of soda will to some extent restore the energy of the developer, but such doctoring is, at the best, somewhat hazardous. My formula, which, after much experimenting, I have found, after more than four years' practice, to be thoroughly reliable and in every respect satisfactory, is as follows:

SOLUTION NO. 1.*

Soda carbonate	50 grains.
Water	1 ounce.

SOLUTION NO. 2.*

Hydrochinone	12 grains.
Soda sulphite (crystals)	60 "
Water	1 ounce.

For use mix:

No. 1	1 ounce.
No. 2	2 "
Water	1 "

(* This is the same formula that was recommended in the last article.—ED.)

"The water is added either warm or iced, according to the season, in order to give the developer the proper temperature. The image will make its appearance rather slowly — on a properly exposed plate in about two or three minutes — but once started development will proceed rapidly and progressively to the attainment of the finest detail and any required density. The film will never become stained, under the most protracted development, and, owing to the strong tanning action of the hydrochinone, frilling, even in warm solution, is exceedingly rare. The same conditions that govern pyro development, with regard to intensity and detail, hold good in the case of this reducing agent, an increase of hydrochinone giving strength and dilution producing detail. The amount of alkali in the formula given above being already large, I do not favor an increase of it with a view of forcing up detail, my mode being to obtain the proper intensity first, and then, if required, finishing up for fine detail in water made slightly alkaline with soda carbonate. The plate is, of course, transferred to this without washing."

(To be continued.)

* Continued from Vol. XI, No. 6, page 59.

Town Sewerage in Relation to Civil Architecture.*

BY E. KUICHLING.

THE powerful impulse which the remarkable development of science and industrial art, during the past few decades, has imparted to modern civilization, has had the effect of inducing an astonishingly rapid growth in the population of nearly every large city. Among the reasons that may be assigned for this growth, the principal ones are doubtless the general increase of wealth, resulting from more skillful management of business enterprises and the payment of higher wages to employés, the consequent desire for the comforts, recreations, and luxuries obtainable in large communities, and the attraction which the possibility of securing profitable employment exerts upon the population of agricultural districts. A study of the census reports of our own and other lands shows that the concentration of population in large cities still continues, and, in fact, that the rate of increase is steadily growing. The introduction of so many new inhabitants, however, occasion periodical insufficiency of accommodation in these places, and thus requires commensurate improvement in both public and private work, not only in order that proper care may be taken of the new arrivals, but, also, that no serious danger to health shall result from the aggregation of large numbers of people upon a limited area of territory. Experience has proven that, sooner or later, the site of such aggregations will become pestilential, unless early provision is made for the safe removal or destruction of the putrescible organic wastes produced by the occupants, and as the study of the precise relation of these wastes to the diseases prevalent in dense communities has latterly become very extensive, the expansion of our knowledge has led to the development of a special department of applied science, called sanitary engineering, which deals with the promotion of the health, comfort and longevity of mankind. Now, since one of the provinces of architecture is the accomplishment of the same purpose, there is accordingly a common ground upon which the architect and sanitary engineer can meet; and upon the particular corner of this ground which relates to the sewerage of cities, it has been suggested that we stand together for a short time today.

Sanitary science in general is not a new thing in the world's history. Much pertaining thereto was well understood in ancient times, and the remains of elaborate drainage works have been brought to light by recent excavations of the sites of some of the former centers of civilization. Perhaps the earliest written formulation of the elementary principles of this science is the code of sanitary laws laid down by Moses in the Old Testament. Thus, in Leviticus, chap. xiv, verse 37, where a plague-infected dwelling is described, we cannot fail to recognize in the expressions: "The walls of the house with hollow streaks, greenish or reddish, which in sight are lower than the wall," a description of a wet subsoil polluted with filth. The ancient remedy prescribed for such a condition was the entire removal of the infected portion, its reconstruction with clean, new materials, and the thorough cleansing of the remainder in all particulars. At the present time, little more than this would be done by our city health officers in a similar case, and the additional work would consist in the examination of the water used by the inmates, and the removal of all accumulations of decaying organic matter from the premises; special stress would also be laid upon the necessity of efficient under drainage and sewerage, in order to prevent dampness and any further pollution of the soil.

Other principles of sanitation were likewise enunciated by Moses, which are still regarded as standards, and form the basis of certain recent systems for rendering harmless various offensive wastes. Moule's earth-closet, and Petrie's application of peat, may be cited as instances of this kind.

The rules, however, which were of easy observance by a nomadic people, who could quickly leave a tainted locality, required considerable amendment after the migratory habits were abandoned in favor of permanent abodes in a single spot. For social and defensive reasons, large numbers of persons gathered together more or less compactly in communities or cities, and it was soon found that almost as much was to be feared from the diseases which developed in dense populations as from the attacks of external foes. Great care, accordingly, became necessary in the choice of locations for new towns, both with regard to the preservation of the public health, and to successful defense in times of war. These important principles were keenly appreciated by the ancient Romans, whose conquest of the world was distinguished by the foundation of a vast number of cities, connected together by great roads, and provided with extensive sanitary works for the welfare of the inhabitants. In fact, the Roman civilization in Europe was characterized by the concentration of the population in cities, and the almost entire absence of country dwellings. We are informed by Latin authors that much attention was paid to the selection of sites for their towns, particularly with the view of securing freedom from noxious exhalations, and obtaining efficient drainage. The extensive sacrifice of domestic animals, kept for a long time in a locality, previous to deciding upon the foundation of a city, possessed, in reality, a scientific significance; for when the livers and certain other organs were found in a healthy condition, it was regarded as evidence that the soil of that locality was safe for the occupation of human beings, and that its waters were fit for their consumption. Examinations of the subsoil were also made to ascertain whether it was capable of sustaining the weight of the contemplated structure, and whether it contained an undue amount of ground water. If all of these conditions were found favorable, work on the new site was generally commenced by systematically draining it, as well as the adjacent lands; and as soon as a sufficient population was attained to warrant the expense, other improvements specially designed for the health and comfort of the inhabitants, were carried out. The sanitary work done by the ancient Romans is thus seen to give evidence of much commendable wisdom, and of remarkable municipal enterprise.

With the fall of the Roman Empire, however, the development of practical sanitary science ceased for many centuries, and nearly all of the important public works that had been constructed for the maintenance of health in populous cities, were allowed to decay, and even to become utterly forgotten. As a consequence of this neglect, the condition of densely inhabited towns became deplorable, and relief was sought by the formation of smaller communities, in the agricultural districts. A number of large cities, however, which were distinguished by an unusually favorable sanitary and commercial location, continued their existence, but their growth was very slow, and serious epidemics were of frequent occurrence. In spite of such repeated warnings, few efforts for improvement appear to have been attempted, and these only when an exceedingly large mortality threatened the ultimate condition of the physical sciences, which are the handmaids of hygiene. The measures adopted at such times were rarely of permanent value, and it was not until civilization had sufficiently advanced to lead again to the formation of large towns, that considerations of the general health and comfort of the population gradually compelled earnest attention to be given to the subject of the systematic removal of the dangerous organic wastes. Especially slow appears to have been the progress of the art of the sanitary drainage of dwellings and cities; and, in fact, so recent is the formulation of the principles of scientific sewerage, that many of the pioneers of the art are still counted among the living.

The relation between architecture and the sewerage of cities will doubtless appear very remote at the first glance, but, upon reflection, a strong mutual dependence of these arts can be easily discovered. The development of a large city involves an accumulation of wealth by many inhabitants, and the creation of desire for personal comfort and luxury. To satisfy this desire, the architect's skill is first called into requisition, and hence large towns become the special field of important architectural operations. Particularly is such the case in our own country, where the physical and intellectual activity of the people is much more concentrated in cities than in the Old World, and in consequence of this fact the best specimens of American architecture are generally found in populous towns, and their immediate vicinity. The increased value of land in large cities, as well as the effort to provide better for great multitudes upon relatively small areas of ground, has also resulted in the development of an entirely new type of buildings, which is characterized by an unusual height of walls and a large number of stories, and which has been adapted to a variety of purposes. Structures of this kind are necessarily more or less monumental in character, and require the utmost stability of their foundations, in addition to pleasing appearance and convenient arrangement. They must, moreover, be made perfectly healthy in all their parts, otherwise the large outlay involved in their erection will not meet with adequate returns. Now, both of these essential features are dependent in high degree upon the local sewerage system, and hence it allows that architectural progress is always impeded where facilities for drainage and the removal of organic wastes are absent.

This statement likewise holds true in the case of smaller and less pretentious buildings than the class just referred to, since here the cost of securing proper sanitary conditions by individual enterprise is generally so large as to become prohibitory. Even though a few thoughtful persons should be able to render their own habitations reasonably salubrious, yet they are still exposed to the dangers that may emanate from contiguous premises, where sanitary precautions are neglected. In compact communities, therefore, it is important that every household shall be provided with ample facilities for getting rid of all objectionable waste matter, since the retention of such wastes at any point is actually a menace to the health of the entire neighborhood; and should infectious disease break out at one of these points, its intensity is sure to be greatly aggravated. The provisions of such facilities must accordingly become the subject of municipal action, and in their design and execution it is obvious that architects have a material interest.

In malarious urban districts, or in those which are undrained, the character of the population is always somewhat unstable. The owners of the land have consequently no incentive to erect expensive buildings, and hence only light and temporary structures are built, which afford little opportunity for the display of architectural skill. On the other hand, we notice that in healthy localities costly edifices are rapidly multiplying, also that as soon as proper drainage works have been constructed, sites which were previously avoided find ready sale. The cause of this general preference for dry locations is found in the fact that dampness of the soil under human habitations has gradually come to be recognized as the chief factor in the production of pulmonary diseases, rheumatism, and various fevers. Furthermore, that after the level of the subsoil water in a populous district has been permanently lowered by properly built sewers, both the amount of sickness and the death rate are greatly reduced, and, finally, that the position of the subsoil water level usually limits the depth to which excavations for basements and foundations can be carried without undue expense. The prevention of large fluctuations in this water level by suitable drainage work is, moreover, of much importance to the architect, inasmuch as the stability of a foundation, that has been designed for a compact and dry soil, may become seriously affected by the saturation of the earth directly below heavily loaded walls.

It may be remarked here that, in the case of large cities, the drainage of the surface and the subsoil, as well as the removal of organic wastes by water-carriage, is commonly effected by a single subterranean conduit; but when circumstances demand that the conduit containing such objectionable wastes shall be absolutely impervious, a separate pipe, laid under or alongside of the former, and simultaneously with it, is sometimes provided for the interception of the subsoil water. Drainage and sewerage are thus performed by a single operation, and even where sewers have been constructed as water-tight as possible, with a direct view of excluding subsoil water, a marked reduction in the level of the latter always follows from the simple act of cutting a trench on a true grade to some outfall, and the provision of a relatively smooth and continuous surface along which this water may flow in a thin sheet. The principal function of a sewer, however, is the quick removal of putrescible refuse matter from human habitations, and the delivery of such matter to some point where it will not become offensive or dangerous. Various systems for the

* Paper read before the Western New York State Association of Architects February 7, 1888.

accomplishment of this end have been devised, but, in general, it may be said that the system which depends upon the agency of water to carry away the waste and keep the conduits free from accumulations is the simplest and best adapted to the needs and complications of modern municipal organizations, especially in countries where the republican form of government exists. As the limit set for this paper prevents me entering further upon a consideration of the merits and disadvantages of the several systems, it will accordingly be assumed that the statement just made admits of satisfactory demonstration, and that a city well provided with an efficient network of sewers affords the most favorable conditions for the development of modern architecture.

The important features of any system of sewerage, viewed from an architect's standpoint, are the depth to which the sewers are laid below the surface and the kind and quantity of waste matter which they have been designed to receive. Both of these factors contribute largely to the determination of the character of the buildings, and the amount of money to be expended in their construction. It frequently happens that the growth of an entire district, which is amply drained and particularly adapted for residence purposes, is utterly prevented by the existence of some factory, whose offensive wastes are permitted to pollute the sewers of a large area. Examples of this kind are numerous, and among them the case of petroleum refineries, slaughter houses, gas works, soap and rendering factories, and similar establishments, may be cited. Conversely, where the sewerage is inadequate, or the ultimate outfall for the sewerage unsuited for the reception of manufacturing wastes, industrial works cannot be located, and the community or district must suffer the financial loss which the absence of large industries always entails. It is evident, therefore, that the selection of a system of sewerage is a matter of great concern to every community, and that in the final decision architects, as well as sanitarians, should have a controlling voice, since their special training in both artistic and practical directions, renders them admirably qualified to criticise the general outlines of such a scheme.

In reaching their conclusions, however, it is necessary for the architects to view the subject of the sewerage of cities broadly, and to remember that the sanitary engineer must occasionally sacrifice the interests of some small locality in order to adapt its design to the economical interests of the large remainder; also that in populous towns the maintenance of any system of removing offensive organic wastes is always invested with many perplexities. No method of accomplishing this purpose automatically, or without intelligent human supervision, has yet been devised; and where a reasonable amount of care on the part of the authorities, and the citizens generally, is not given to their sewers, trouble from the latter will inevitably arise. Constant attention is therefore required for the successful operation of the system, and architects can do much toward arousing the public from their apathy respecting municipal sewerage, and hence also toward the promotion of the general prosperity of the community. The fundamental principle of such work is to remove the organic wastes rapidly, and beyond the limit of danger, before any deleterious putrefactive changes take place, and the question of the proper disposal of these wastes is a necessary sequel, but which cannot now be taken up, except in the most general manner. One of the commonest errors that corporations commit, in this respect, is the defilement of small natural water courses with sewerage, and the ultimate covering of such channels after they have become intolerable. Valley lines may always be improved by a proper regulation of the natural channel and marginal sewers can be constructed to avoid polluting the stream. Only when the volume of water is very large in comparison with that of the sewerage, can the question of a direct discharge into the stream be entertained, and even then, much will depend upon the velocity of the current and the quality of the sewerage. No general rule for the government of this subject has yet been agreed upon by sanitarians, and the matter is earnestly debated in every land, the tendency being rather in favor of clarifying sewerage before emptying it into rivers of moderate size.

The ventilation of the public sewers is likewise a proper subject for the consideration of architects, especially in our northern cities. During long periods of cold weather and snow fall, most of the openings leading to the sewers from the street surface are completely closed by snow or ice, and the atmosphere in the sewers becomes considerably compressed. Relief is then sought through the house drains, and if these happen to be defective, sickness is apt to break out. Under such circumstances, the slight resistance offered by the water seal of ordinary traps is easily overcome, and unless the sewer air finds free vent through capacious soil pipes, it will escape into the apartments.

In the foregoing, an attempt has been made to point out a few of the relations that the sewerage system of a large city bears to the architect's work, and to show that the members of this profession can easily exert a vast influence in the formation of a proper public opinion with respect to the necessity of sanitary drainage. By the persistent efforts of those who realize the evils which result from the wholesale pollution of water, soil and air in crowded cities, a strong sentiment in favor of health and cleanliness may gradually be developed, and the people made to understand that the annual expense of maintaining a rational system of sewerage is much less than the aggregate of individual expenditures for the maintenance and cleansing of receptacles for the storage of organic wastes. The subject thus briefly set forth largely affects the life and comfort of mankind, and is sufficiently interesting to invite more exhaustive investigation. Architects may, accordingly, regard many of the technical problems connected with the sewerage of cities, as forming a branch of their own profession, and by devoting more attention to these problems, they will not only find the study thereof extremely fascinating, but will also be better enabled to coöperate with engineers in improving the sanitary condition of populous towns.

ARCHITECT RALPH MERRIMAN, recently of the supervising architect's office at Washington, has opened an office in the Calumet building, Chicago. Mr. Merriman is a gentleman of ability, and should be heartily welcomed by Chicago architects.

Art Education in our Public Schools.*

BY HAROLD SMITH.

DRAWING in some form or other has been taught in the public schools for many years; but of work that is worthy of mention, either in its purpose or in its results, there has been very little done until within the past fifteen years.

The first movement was in 1820, in Boston, by a man named William Bentley Fowle. He was a member of the board of education, and took charge of one of the schools to prevent its being disbanded, the head master having been taken sick. Master Fowle remained a teacher through the rest of his life. During the time he was connected with the public schools in Boston, he introduced radical reforms; among others, the use of blackboards and instruction in drawing; the admission of girls to schools during the entire year. Previous to that time they were admitted only from April to October; and previous to 1790 they were not admitted at all. He advocated drawing for its value educationally; that is, as a help in gaining knowledge of other subjects.

He was allowed to remain in the public schools only two years, and then was thrown out by an ignorant board. Private citizens, however, established him in a school of his own, and the Boston schools were largely remodeled after his ideas.

The next movement that we hear of was in 1884, by a man named Rembrandt Peale, in Philadelphia. Mr. Peale had two ambitions: one was to paint a portrait of Washington which would be accepted by his countrymen; and the other was to establish a system of drawing which should be taught as universally as reading and writing. He finally prevailed upon the authorities in Philadelphia to allow him to give instructions in drawing in the high schools. After teaching there about two years, he proposed to give instruction in the graded schools, without compensation. This met with violent opposition, and called forth severe attacks upon Mr. Peale and his entire system. He secured an investigation. A committee was appointed, for whom artists, technical draftsmen, civil engineers, and others testified as to the merits of Mr. Peale's system and instruction. As a result, the committee were compelled to bring in a favorable report. But this did not overcome the opposition, and Mr. Peale, unable to carry his work forward, resigned, without attaining permanent success. He advocated drawing on account of its æsthetic value.

The next movement was in Baltimore, in 1884, when a Mr. Minifie, after considerable urging, was allowed to give instruction in the public schools. He taught for a year or two, but was thrown out by an ignorant board. He advocated drawing from the standpoint of its value to our industries, and made the study of design the most prominent feature of his instruction.

From 1850 to 1860 the subject has received some attention in the reports of superintendents of schools and of a few educators. In 1860 Massachusetts passed a law permitting drawing to be taught in the public schools, when school boards deemed it expedient. In 1870 Massachusetts passed a law requiring drawing to be taught in all cities of 10,000 or more inhabitants. From this time dates the real development of systematic instruction in drawing in our public schools.

The idea which prompted that legislation was the same that founded the South Kensington Museum, namely, that we must protect our manufactured articles by making them more artistic. England discovered that her articles were inferior in their artistic beauty in 1851, at the first World's Exposition, and instead of building a tariff wall around her products, she formed a new department of her government: "The Science and Art Department," and founded the South Kensington Museum. Our manufacturers were not slow to learn the lesson, and it was from this that drawing was made an essential part of the public school work in Massachusetts.

From 1871 to the present time, drawing in the public schools has constantly increased the wealth of the country, so that today it is a part of the regular instruction in nearly all of our cities, larger towns, normal schools, and even in some country district schools.

From 1871 to 1881 teachers who were obliged to teach drawing, or taught it voluntarily, discovered many advantages accruing from this branch other than the industrial advantages upon which it was introduced. During the same period the whole subject of education received much more thought and careful study than ever before. The true aim and object of education was considered. Stated broadly, education was said to be the direction of the development of the human being, to discover all the faculties, capacities and abilities of the individual, and to develop them. That is a very different idea from what had largely obtained before, and which obtains to some extent now, namely, that education is to enable the individual to earn a living. Viewing education from the broader and higher standpoint, one advocates drawing in the public schools because it develops the æsthetic sense, another because of its practical value to the mechanic and the laborer, another because it develops the scientific qualities of mind, and still another because it is a good or convenient thing to be able to draw, or because it is an accomplishment.

Recognizing all these advantages, it is no longer necessary to advocate the teaching of drawing in our public schools. We are now able to turn our attention to the question of *how* it shall be taught, so that it shall be thoroughly educational. The public schools are to develop children mentally, morally and physically. Whatever instruction those schools give must aid such development.

This brings us to a study of the child. Drawing is a knowledge of form. How does the child obtain a knowledge of form? This brings us to the most interesting phase of art instruction, and, possibly, to the most difficult. The art of teaching children is one that absorbs the abilities of the ablest. If it is interesting to study the growth of the animal kingdom or the vegetable kingdom, fancy what it is to study the growth of the human mind in order to be able to wisely direct its development. We cannot change the laws of growth of mind any more than we can change

* Paper read before the Art Institute, Chicago, February, 1887.

the laws of growth of the vegetable kingdom, but we can, to some extent, control the environments of the child and direct that growth. Our study of the child, how the child naturally gets a knowledge of form, shows to us that it obtains this knowledge through the senses of sight and touch. Space will not permit the presentation of the discoveries in regard to what we learn from these two senses; it must suffice to merely state what is accepted by all who studied or investigated the subject. We can never know solidity and distance by sight alone, but only through sight and touch, and through movement and sight. The quickest and surest way of getting accurate and definite knowledge of form is by seeing, handling and making the form. All form is reducible to geometric forms; therefore, the form in its simplest condition may be said to be geometrical. Hence we begin by acquainting the child with geometrical forms through seeing, handling and making them. In considering this subject one should bear in mind the condition of the public schools. Imagine, if you please, a room of children from four to eight years of age (that being the lowest primary grade), and from seventy to seventy-five of them; a teacher who never had any instruction in drawing and thinks she can never learn to draw, that she has no talent for drawing, and that if she had providence would, in its own mysterious ways, have manifested that capacity to her, and that to try and get it in any other way would be flying in the face of providence. Extend this to include six to eight millions of children, and teachers in proportion; remember that one hour to one hour and a half per week is all that can be given to the subject, and you have some idea of what may reasonably be expected from the public schools. But, on the other hand, you should bear in mind that there are many teachers who have received a long and thorough training in the art, and who are engaged in the work of instructing the teachers and the pupils, and are building up a course of instruction which is rightly and properly termed "Art Education." There are also many of the regular teachers, who, having received no training in drawing, are applying themselves to the study, and already accomplishing excellent results. We are just beginning to realize the truth of what was said several hundred years ago, that every child who can learn to write can learn to draw. To draw well, to be an artist, is a different thing. We also see how that drawing contributes to the development of the human being mentally, morally and physically, and that it is of practical value to every person, whatever their occupation. Thus, a fourth "R" "drawring" has been added to the essentials of a public school education.

I will now briefly present the work as it is actually being carried on in the public schools of some of the cities and towns in this country. I have indicated the reasons why this method is pursued, and will begin with the work of the lowest primary, where the children range from four to eight years of age. The child is first made acquainted with the sphere, being the simplest form we know of, and an object which is already familiar to the child. We lead the child to discover certain things about it, and to state them in its own language; and if possible, each child is provided with a sphere—that depends upon how enlightened the Board of Education controls the dollars, and whether they see any sense in this kind of teaching, but the idea is that every child should have a form in his own hand; should talk about it in order that he may know about it most quickly and clearly. Clay is then given to the child, and they make the form themselves. At the same time they are asked to think of common objects similar in form. At the next exercise they are asked to make some common object like a sphere; thus the child's individuality is left entirely free, and he makes whatever he has in mind. Here the making, as later the drawing, is an expression of thought. Such exercises invariably develop the creative faculty in children. For the sake of contrast the next form taken is the cube. The child handles it, makes it in clay, and makes objects based upon cubes. Next the cylinder, which combines the characteristics of sphere and cube, namely, a flat and a curved surface. It is surprising to see how cleverly and nicely the children make the forms in clay, and the ingenuity which they display. It is also noteworthy how early children have an appreciation of the beautiful. I was present in a primary room when the children molded a cylinder in clay. The teacher selected three of the forms, one very slim, one very short and thick, and one of good proportions. She named them "Jim," "John," and "Tom," respectively. Holding them before the little folks, she asked them which they thought was the most beautiful—which they liked the best. Almost unanimously they replied: "Tom!" Upon being asked why, the answers by individual pupils were not so ready, but the teacher finally elicited from them that "Jim was too tall and slim," and that "John was too short and fat." Thus in these simplest forms was called forth that feeling for the beautiful that is a religion in itself.

They also have exercises in which they take a little piece of wire or thread and cut their clay forms, thus making other forms. In this way they proceed through a number of the geometrical forms—square prism, right angle triangular prism, cone, pyramid, ellipsoid, ovoid, etc. The next step is deriving from the solids their surfaces. This is done by calling attention to one face of the solid and leaving the children to describe it and talk about it, as, for instance, the face of a cube as a square, and the cube has six square faces, that a cylinder has two plain faces and one curved surface; that the square prism has four oblong faces and two square faces. These shapes they also derive from their clay solids by cutting a thin strip off of them with a piece of thread or wire.

The next step is to show how surfaces in meeting form an edge, and that edge may be represented by a line. Also, that in cylindrical objects where there is no edge which forms a line—no union of surface—there is a disappearance, and that that disappearance may also be represented by a line. In connection with and during the work referred to, instruction in position, pencil holding, free arm movement, etc., is given in order that the pupil may acquire good habits in execution. The children are also furnished with sticks, and arrange them first under the direction of the teacher, and think of them as edges, and then represent them by drawn lines. They are taught definite distances, such as inch, two inches, three inches, etc., and are required to draw lines at given lengths without measuring or testing, getting their ideas from objects. They are also allowed to arrange the sticks according to their own fancy and then draw what they have made. Being supplied with the little surfaces, that is squares, oblongs, ellipses, triangles, etc., they are taught to arrange these in simple designs, being taught symmetry, proportion and arrangement, and then draw what they have made. Thus throughout the drawing and the making is the expression of the thought of the child. New forms are constantly being introduced, and the child's acquaintance constantly enlarged.

In the intermediate or lower grades, the study of form is divided into three divisions, for three distinct purposes, each interlacing and running into the other. The first is the study of the facts of form. These facts are represented in a drawing from which the object may be made. These are commonly known as "working drawings," such as are used by all mechanics, and are the bases of all industries. It is deemed important that every child should have some knowledge of this branch, and it is also a most natural step toward drawing the *appearance* of form, which is our next division. In the working drawing three dimensions are expressed, but in two or more separate and distinct drawings connect with one another by conventional lines, known as "working lines," to show that each drawing is a different view of the same object. In drawing the appearance of an object the three dimensions are expressed in one drawing, but, at least one dimension is expressed as it appears, and not as it really is. This division is called *representation*, or the drawing of form as it appears to the eye. Everyone should have some ability in this direction, as no one can completely express their thoughts by language alone.

The next division is entitled *decoration*, or the study of form, for the purpose of ornament. Here natural forms are studied, from which the *motif* is obtained to form the ornament.

These three lines of study begin in the grammar school and continue side by side through the grammar and high school, each being essential in the education of every child. The aim is not to make artists nor architects, mechanics nor designers, but that every person should have some knowledge of the appearance of form and some ability to represent it; some know of the drawing which workmen use, so that they may need plans and elevations, and some ability in expressing their own ideas in regard to machinery, furniture, houses, etc; and also some knowledge of what constitutes a good design in any article; and some ability in expressing their own idea of design.

The high school work, in brief, is as follows: In construction, pupils make complete working drawings of tools, pieces of machinery, etc., directly from the object; plans and elevations of houses, details of carpentry, etc., and, beginning with flat washes, work their drawings in colors. In representation, as soon as they can draw a group of small objects in outline accurately and readily, they take up the study of light and shade, and, with crayon and charcoal, drawing from casts and objects, thence into color; of painting of groups from still life; study of backgrounds, etc. In decoration, beginning with the elements of color, copying some bits of historic decoration, original designs in color, painting artificial flowers, conventionalizing them and using them for original designs. Thus, at the end, we see how each division interlaces and runs into the other.

The study of the history of art is also taken up and pursued by text books, charts and drawings. Pupils are made acquainted with the characteristics of Egyptian art in sculpture and in decoration, and also of the different periods of art down to modern times. In connection with the study of light and shade, and also the study of historic ornament, clay molding is also used.

Here, as in the primary grades, the knowledge of form is gained through the sense of sight and touch. If you wish the mind to express roundness, as in a bunch of grapes or apples, you want that roundness expressed completely through the medium of light and shade. Let the pupil first model the bunch of grapes in clay, so that the mind may more thoroughly grasp the idea of roundness, and the pupil will much more readily express roundness in a drawing. The laws of growth of mind are the same in an adult as in a child; the *rate* of growth only varies.

I need hardly speak of the moral effect of art education. Any line of education that brings a person to a closer study of the beautiful in nature, or in ornament, or in architecture is a religion in itself. If art owes much to religion as furnishing one of the greatest motives that the human mind has ever aimed to express, art can, to a large degree, pay its debt to religion by furnishing a basis for moral action and duty that will inspire to as great deeds as have ever yet been performed by man!

A Phase of Ruskin's Character.

IN an article in the January *Century*, W. J. Stillman gives the following, to show one phase of the great critic's character. "Any present judgment of him as a whole is difficult if not impossible, because there are in him several different individuals, and the perspective in which we now see them makes of his position as an art teacher, the dominant element of his personality; whereas, in my persuasion, his art teaching is in his own nature and work subordinate to his moral and humanitarian ideals. He always saw art through a religious medium, and this made him from the beginning, strain his system of teaching and criticism to meet the demand of direct truth to nature, the roots of his enthusiasm and reverence being not in art but in nature, and in her beneficial influence on humanity. A little incident of our Alpine summer will illustrate this view of his character better than all my appreciations. During our stay at Geneva he had some mountain drawing to do at the Perte du Rhône, and asked me to drive down with him. Not far from the point of view which he had selected was a group of wretched dwellings, miscalled cottages, but which in America we call shanties—not the picturesque wall and thatch structures which the word cottage calls up in England, but built of boards, shabby without being picturesque, and to my American notions only capable of association with poverty and discomfort. Ruskin asked me to draw them while he was drawing the mountains. The subject was anything but attractive or pictorial, and though it should have been enough for me that he wished me to draw it carefully, I only obeyed my own feeling

and made a careless, ten-minutes drawing—all the thing was worth to me. When Ruskin drove up to take me in, on the way back to Geneva, and saw what I had done, he was—and I must say, with good reason, offended at the indifferent way in which I had complied with his request, and after a few reproachful words, threw himself back in the carriage in a sullen temper. I replied that the subject did not interest me, and that the principal feeling I had in looking at it was that it must be a wretched home for human beings and promised more fevers than anything else, and that, in short, I did not think it worth drawing. Nothing more was said by either of us until we had driven half-way back to Geneva, when he broke out with, 'You are right, Stillman, about those cottages; your way of looking at them was nobler than mine, and now, for the first time in my life, I understand how anybody can live in America.' It has always seemed to me that this was a true epitome of the man's nature—first, the æsthetic, outside view of the matter; then, the humanitarian, overpowering it; the womanish pettishness, and the generous admission of his error when seen; and after this confession, his greater cordiality to me—for he always valued more anyone who brought him a new idea, though he often broke friendship with those who differed from him too strongly." Mr. Stillman's article on Ruskin as a whole is most interesting. It is accompanied by a frontispiece portrait.

The Brochs of Celtic Scotland.

THE usual fortnightly meeting of the Edinburgh Architectural Association was held May 3—the president, Mr. Hippolyte J. Blanc, in the chair. After the usual preliminary business, Mr. Gilbert Goudie read a paper on the Brochs, or Round Towers, of Celtic Scotland. Proceeding to describe those unique and remarkable structures of remote antiquity, which had not previously engaged the attention of any architectural body, and are not to be confounded with the ecclesiastical round towers of Ireland or of Scotland, Mr. Goudie submitted as a typical example the broch in the Island of Mousa, Shetland. This, the best preserved of existing specimens, is still standing to a height of upward of 40 feet. It is a circular tower, consisting at first of a solid wall (unless where pierced by three chambers formed in its thickness). At the height of 8 feet this massive wall, hitherto 15 feet thick, assumes the form of two concentric walls, with an intervening space of about 3 feet, which is converted into a succession of horizontal galleries, six in number, some of them about 5 feet high and some lower, immediately above each other, and intersected by a staircase leading to the top. The central area is an open circular court of about 30 feet diameter. The only external aperture is the entrance, about 5 by 3 feet, passing through the main wall to the inner court, from which the stair to the galleries ascends. The stair and galleries are lighted by four sets of small rectangular window openings above each other, looking into the court. The walls are of very solid masonry, the stones of good size without tool-marks, and are dry-built without lime or clay mortar. There are also some rude buildings attached to the main wall on the inside, irregular in form and undeterminable in object. These architectural features described apply to broch structures everywhere, with variations in size and in constructional details in individual instances, foundations of large rambling buildings on the outside being very common. The most laborious investigators of brochs have been Dr. Joseph Anderson, the Rev. Dr. Joass, of Golspie, Sir Henry Dryden, and the late Mr. George Petrie, who have given measurements, and collected a mass of information regarding their structure and contents which now enables us to treat the subject with some degree of scientific accuracy. As regards the contents of the brochs, the lapse of time since their erection and occupation has led to the destruction of what was most perishable within them, but there have been found numerous stone querns or hand-mills, spindle whorls of stone, stone cups, lamps, whetstones, occasional articles of bronze, such as pins and tweezers, bone combs and pins, implements of deerhorn, etc., all indications of an iron-age occupancy. On one occasion, in Orkney, a slab bearing an incised cross, with an Ogham inscription, was discovered. Coming to the consideration of the origin of the brochs, the architectural features of their construction were described as being essentially native and Celtic, and so dissimilar to anything known in Scandinavia as to put out of court the contention of the late Dr. Fergusson, author of the "History of Architecture," that they were erected by the Scandinavians. The lecturer, therefore, had no hesitation in asserting the theory which assigned them to native builders, old Celts of Scotland and the Isles, in the pre-Scandinavian period terminating more than a thousand years ago. They are now found in Orkney, Shetland, Caithness, Sutherland and Ross-shire, on the mainland and in the Isles, but individual instances remain so far south as in Perthshire, Stirlingshire and in Berwickshire, indicating that they existed over the whole Celtic area in this country, though lapse of time and agricultural improvements have accomplished their almost total obliteration except in the remoter districts. It is thus in Scotland, and in Scotland alone, that these structures are to be found. The brochs appear to have been simply towers of defense, possessed of large capacity for accommodation, though by no means of a comfortable kind, and of almost unassailable strength in the then methods of warfare. The question of the date of their erection is beset with difficulty. No record of their erection or ordinary occupation is preserved. It is true there are instances of occupancy recorded in the northern sagas, namely, by Bjorn Brynjulfson, about the year 900, and by Erlend about A. D. 1155; but these were merely flying visits by adventurers with their lady loves, and the selection of Mousa on both occasions, more than two centuries apart, seems to warrant the suggestion that it was then, as now, the only broch in Scotland remaining in a state fit for even temporary habitation. It has been advanced that the absence of reference to brochs by Roman authors in treating of the conquest and partial occupancy of Caledonia, while such structures are known to have existed at one time in districts with which they were familiar—e.g., the valley of the Forth, where at least one example remains—is ground for assigning their erection to an exclusively post-Roman period—i.e., subsequent, say, to the fifth century. It is also the fact that articles discovered in, or associated with, brochs are usually of a comparatively late iron-age type, are not indicative of the highest antiquity. But in the opinion of the lecturer great weight was not to be attached to negative evidence of this kind. Their existence might have been ignored by the Roman writers that are known; and with further systematic exploration evidence of earlier civilization may at any time be produced, the articles at present known being naturally relics of latter occupants. Some of the brochs were completely in ruin, and had become grass-grown mounds, where pagan interments, sometimes with cremation, were made in them. Their destruction must, in any view, have taken a prodigious time to accomplish, and he was not disposed to confine their erection and occupancy within any limitation of time that it was within the power of existing knowledge to determine. Mr. David M'Gibbon proposed a hearty vote of thanks to the lecturer, which was unanimously agreed to. Mr. Blanc then gave a short account of the work of the first section of the work class, and said they hoped to be able next year so to systematize the classes as to afford to the young men such advantages as should be useful to them if they had any desire to come forward for the examinations under the Royal Institute of British Architects. Mr. M'Gibbon said they had thirty members in the class, and out of that number twenty-two had sent in competitive plans and elevations for the prize subject—"A Scottish Mansion." The plans and elevations were most creditable, and would do credit to any set of men. The committee had unanimously awarded the first prize to Mr. John Begg, with Messrs. Victor Horsburgh and Robert Lorimer equal for the second place. The proceedings then terminated.

Illinois State Association of Architects.

THE regular monthly session of the Illinois State Association of Architects was held Saturday afternoon, June 2, at No. 66 Washington street, President Samuel Treat presiding. The following members were present: L. D. Cleaveland, S. A. Treat, W. W. Clay, L. G. Halberg, L. J. Schaub, O. J. Pierce, D. Adler, L. H. Sullivan, R. C. Berlin, George Beaumont, C. L. Stiles, C. J. Warren, A. Smith, N. S. Patton, J. L. Silsbee, Henry Raeder.

Upon calling the meeting to order, the chair called for the reading of the minutes of the preceding meeting, which were read by Secretary Berlin, and, on motion, approved as read.

The Chair: We are now ready to hear the reports of committees.

W. W. Clay: Mr. Chairman, the Executive Committee have no special report to make, except that we have been considering the fact of our not having now any permanent quarters and suggest the propriety of adjourning over until October 1, a lapse of three meetings, which is about the customary thing, and by that time we may have something further to offer. I would therefore move that when this meeting adjourns, it adjourns to October 1.

D. Adler: I would like to amend by making it September 1.

L. H. Sullivan: That would require a change in our by-laws.

Mr. Adler: I might as well state the reason why I suggest the amendment. I believe under an old resolution, in the early days of the Association THE INLAND ARCHITECT was made the official organ of the Association. The change to the first Saturday of the month was made to meet the wishes of the publishers of that paper, as the reports of the meetings, held at the close of the month, came too late to appear in the regular edition, and had to be put in the intermediate edition. I think it is better to have the meetings earlier in the month to make sure that the reports can appear in the regular number, as I think it is desirable to have the proceedings published as promptly after the meetings as possible.

The Chair: You had better give notice today so that it can be taken up again.

Secretary Berlin: The by-laws require twenty days' notice to be given.

Mr. Adler: What is the date fixed for our meetings?

Secretary Berlin: The last Thursday afternoon of each month.

Mr. Adler: I suppose that was the way it stood, but I think the date was changed afterward by the Executive Committee, of which I was a member. I'll make a motion to this effect: When this meeting adjourns, it adjourns to meet the first day of September.

The motion, on being put by the Chair, carried.

Mr. Adler: I now make the motion, supposing it will take the regular course:

Resolved, That on and after this date, the regular meetings of this Association shall take place on the afternoons of the first Saturday in each month, beginning with September and ending with June.

Mr. Clay seconded the motion, which was carried.

The Chair: Mr. Sullivan has something which he wishes to say on a subject of interest to the profession.

Mr. Adler: Mr. Chairman, before Mr. Sullivan makes his remarks, I would like to make another motion:

Resolved, That after the passage of this resolution, the mode of procedure for application for membership to this Association shall be made to correspond with that adopted by the Western Association of Architects at its last convention.

Mr. Adler: I do not know, but suppose all are familiar with the action taken at the convention, which was that, hereafter, anyone applying for membership to the Western Association must submit with the application for membership a description, illustrated by photographs, of at least three buildings of their own designing, and constructed under their own supervision and care; and these must be accompanied by a statement from the owner or occupants, that the buildings are satisfactory and they are satisfied with the architect's work. And before final action is taken on the application by the board, such investigation is made of the plans of the buildings to determine whether they are of a character, in the opinion of the board, to make the applicant a desirable member of the association, before submitting the applicant to a vote of the members of the association.

Mr. Sullivan: My recollection is, that the Executive Committee, some time ago, were requested to revise the constitution and by-laws, and it

might be given as further instruction to incorporate that in the constitution.

Mr. Adler: Suppose we make it as an amendment, that when the Executive Committee submits to the association the revision of the constitution and by-laws, they may be made to conform to the practice of the Western Association.

After some further discussion, participated in by Messrs. Sullivan, Patton, Beaumont, Clay and Adler, the motion, as amended, on second of Mr. Clay, was adopted.

The Chair: Now, Mr. Sullivan, we are ready to hear from you.

Mr. Sullivan: I wish to talk on the subject of a Protective League. When the idea of such an organization came up last fall, it was suggested that all the architects of the country should be united in one organization. It was argued by those favoring the movement, that such an organization should be a working organization, through, perhaps, a central committee, and it was assumed at the same time that the duty of this committee in a large sense, working in the interest of the entire profession, would be, in certain cases where equities were involved and not clear to have the matter transferred from the owner, that the organization should take the matter out of the hands of the individual architect, and carry it as far as may be through the courts, until a final decision was arrived at that would establish a settled principle. It was presumed that weaker members might tire of fighting for their rights, if not in the first courts, in the second, perhaps. It was claimed when the knowledge of such a strong organization became broadcast, when the country became thoroughly aware that the committee would not take up the petty quarrels between architects and owners, but would defend all equities of architects on principle to a finality, there would be less disposition for litigation with the unscrupulous. My own preference would be to see such an organization include the profession of all the associations of the country, rather than to have it confined to the efforts of a local association. Of course such an organization would require money to conduct its prosecutions and defenses, which should be subject to the call of the committee. I wished to introduce the subject, and should like to hear the views of the members upon it.

Mr. Patton: Mr. President, I have an experience which, it seems to me, might develop into a case that would properly come before such an organization. It is of a contract for certain work which was practically finished — only a small amount being incomplete. I had not personally examined the work for some little time, as it was done under the supervision of a superintendent. In making a certificate I happened to overlook one matter, and issued it for a larger amount than was due by the stipulations. A short time afterwards a defect in the work began to appear, and when the work was finally done it wasn't a first-class job. The owner thought the contractor should not be paid in full, and fell back on the architects. We assessed the contractor for damages as far as the amount still due him, and told him he should pay the owner a certain amount of money, and the owner that he had a good claim against the contractor. There the matter rests. The question comes up, how much damage has the architect to assess. It seems to me it should be governed by the money held back, and whatever else should be decided by a court of law between the owner and contractor. If it should be found after work has been accepted that unforeseen defects occur by fault of the contractor, and there is not money enough due the contractor to make the damage good, then comes up the question how far the architect can be held for issuing the certificate?

The Chair: It would seem as if in the first case the architect was to blame. Certainly he issued the over-certificate.

Mr. Patton: The point involved is that while some defects might have been discovered there are some that could not. It often happens that they appear afterwards through the fault of the contractor, and the architect ought not to be held responsible in such cases.

Mr. Sullivan: That would not be such a case as would come properly before such an organization. It is one, as I understand it, between the contractor and owner, which the committee would not be called to take cognizance of.

Mr. Adler: As long as an architect has the power to withhold money, he is to a reasonable extent responsible for its expenditure. I have two cases in my mind that happened within the last ten months. In both cases defective work appeared before settlement. In the one case, before the necessary work was done, it happened the contractor was taken sick, and it had to be done by other parties. When all was done, the bills were rendered for it to the contractor, and paid by him. There were two batches. The first was paid at once; the second, he didn't pay promptly, but paid it after a month or so. In the other case, the contractor quit business and had gone to Duluth, and could not be found, and the work was paid for by the architect, which I think was a much easier solution than to submit to a court of law.

Mr. Sullivan: Where the amount of money involved is small it is not so serious a matter, but when the amount gets up into the thousands of dollars the question of an architect's responsibility for defective work does become a very serious question. I have heard of some cases recently that are rather alarming: where the owners found the wall an inch out of line, ordered it taken down and put up again; and another case, where the owners came along and in the piers found bond stones cracked, and said they wouldn't have this, the architect was to give them a perfect building, and it was his business to see that cracks would not occur; that they should be taken out, and perfect stones put in at the expense of thousands of dollars; that they would withhold the money due on commission, and the architect could get it out of the contractor.

Mr. Clay: Had the architect passed upon the work? It seems to me that the contract is between the owner and the builder; but if the architect has passed upon the work there is a decided difference in that case and one where he has not passed upon it.

Mr. Adler: Just take the practical case cited by Mr. Sullivan, which is the experience of an architect well known in this country. Here the foundation was built and the stone covered with earth. There may be from five to a dozen stone cracked without imperiling the building. I do not think the architect will be responsible, after the building is completed and apparently sound, because the owners have gone and excavated around the building and found, say, three cracked dimension stone, and insist that is not the kind of work paid for, and be obliged to replace them because the owners insist upon it.

Mr. Sullivan: I know of three cases today where such a situation of affairs is likely to result. The bigger the building the larger the commission, hence the larger will be the risk to the architect. It is a matter in which the responsibility of the architect should be definitely fixed.

After quite a prolonged further discussion, participated in by Messrs. Clay, Beaumont, Adler, Sullivan Patton and others, in which it was held there was a growing tendency to a species of blackmail being levied on architects by a class of owners and, elsewise, in other grave matters pertaining to the equities of honorable architects, there existed a necessity for some such league for mutual protection, Mr. Adler presented the following resolution:

Resolved, That Mr. Sullivan be requested to prepare during the summer months a circular letter to be submitted to the Executive Committee of this association, to be distributed by the committee among the members of the profession throughout the country, and that this be done on or before the first day of August next, and that the discussion of the subject be made the special order of business of this association, which shall take place the last Saturday in September, at which meeting the architects of Chicago and elsewhere that take an interest in the matter shall be invited to participate; that the circular be issued to the architects of Chicago and throughout the country, with the request that such as may take an interest and cannot be present, may send in their written opinions regarding the best method of procedure to meet this exigency in professional practice.

On being put to vote the motion prevailed unanimously, whereupon the meeting adjourned until Saturday, September 29

Association Notes.

EDINBURGH ARCHITECTURAL ASSOCIATION.

The fortnightly meeting of the Edinburgh Architectural Association was held May 17, Mr. Hippolyte J. Blanc, president, in the chair. After some preliminary business, Mr. J. C. Watt, F. S. A., delivered the first of three lectures on the "Æsthetics of City Buildings." The subject was taken up in two main divisions: first, the abstract, embracing the natural and external æsthetics; and second, the concrete or artificial, including site, structure, and the entire range of ornamentation. Of the two branches, attention was last night confined to the philosophical; and the views of various authorities on beauty, taste and form, from Phidias to Hogarth and Hamilton, canvassed. Their disquisitions had been engrossed by comparisons of straight lines with curves, to the exclusion of emotion or the play of mind, but their deficiency in this respect had been supplied by Herbert Spencer, who estimated æsthetic pleasure according to the number of powers called into play. The æsthetic sentiments proper were composed of the varied emotions excited in the mind by association. Here nothing but mental activity was involved, and this the lecturer regarded as insufficient to indicate the scope of the subject. He preferred to regard æstheticism as a mixture of beauty and emotion, and the emotion excited by association must be pleasant both as regards the present, and as regards historical affinities. The principles thus evolved were then applied to city building, and the important part which nature and history had played in the composition of a town exhaustively dealt with, especially with regard to the origination of styles, the castellated and Scottish baronial in particular. With reference to the artificial division, letters were read from Professor Blackie and Sir James Gowans. The Lord Dean said as regards Edinburgh: "The only plan (for controlling architectural appearance of buildings) I can think of is, that the Dean of Guild Court should have control over the exterior of buildings, or anything that affected the amenity of the city; and to give confidence to the citizens that this power would not be abused or dealt with by men whose taste might not be of a high order, that there should be added to the Court the president of the Royal Scottish Academy, the president of the Architectural Association, and a citizen whose taste on such matters was recognized. Such an arrangement would, no doubt, help to prevent unsightly erections, as well as other incongruities which tend to destroy the beauty of our ancient stone-built city." The discussion of the second part of the subject was postponed until October. At the conclusion, the lecturer was accorded a very hearty vote of thanks for his paper, after which the meeting closed.

KANSAS CITY SOCIETY OF ARCHITECTS.

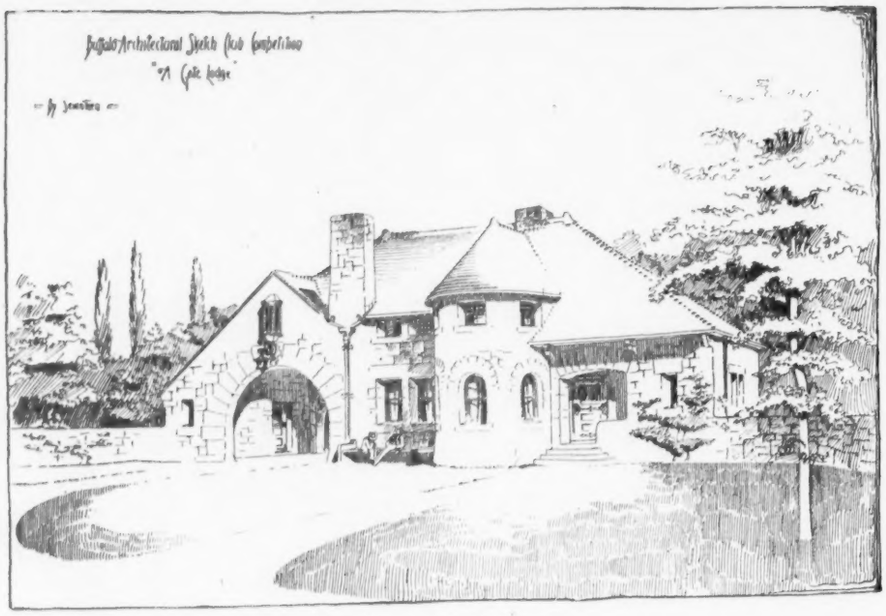
The annual meeting of the Kansas City society was held on April 2, and the following officers were elected for the ensuing year:

President, E. F. Fassett; vice-president, W. S. Matthews; secretary, G. M. D. Knox; treasurer, H. E. Hill; Executive Committee, A. Van Brunt, James Oliver Hogg, W. W. Polk and the president and secretary.

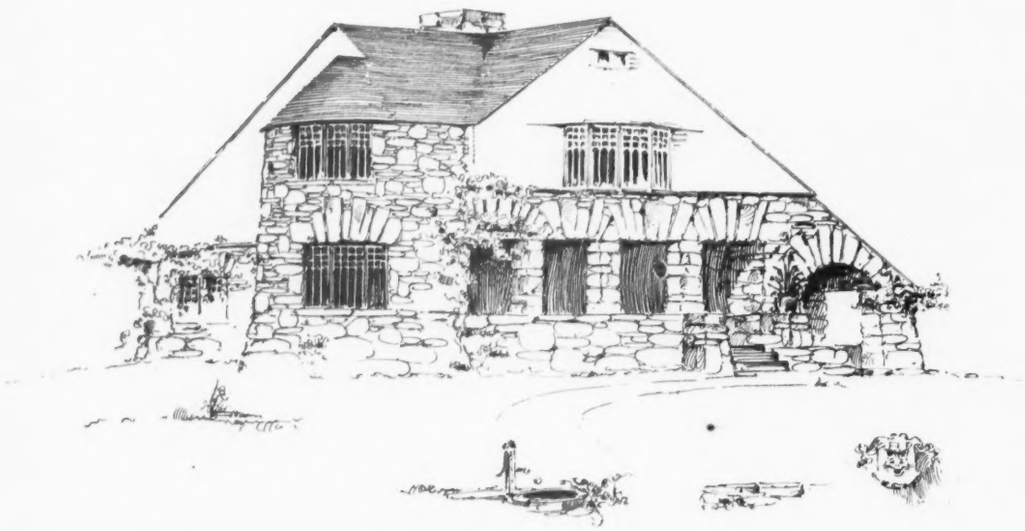
CHICAGO CARPENTERS' AND BUILDERS' ASSOCIATION.

The regular meeting of the association was held May 5, President Hearson in the chair. The subject under discussion was the report of the committee of the National Association of Builders on rules and conditions under which estimates should be submitted by contractors in the building trades.* The rules were taken up section by section, and were generally indorsed. In regard to definite specifications and plans, the speakers took the ground that there was no point upon which contractors were more imposed upon than this, and architects should be educated up to making their specifications more definite. The clause should be made even more strong. That for specifications to say that "anything that is shown in the plans and not in the specifications shall be included in the estimate" is all wrong. In the clause relating to cutting and changing work of one mechanic in placing the work of another, the unanimous sense of the meeting under the present conditions was that this clause, "the carpenter shall do all the cutting necessary," should be eliminated, and cutting should always be paid for when done the second time, or plumbers and others should have their own carpenters to do the necessary cutting. Upon the adoption of article 9, the matter was laid over to the next regular meeting. The

* For rules, see page 24, Vol. XI, No. 2.



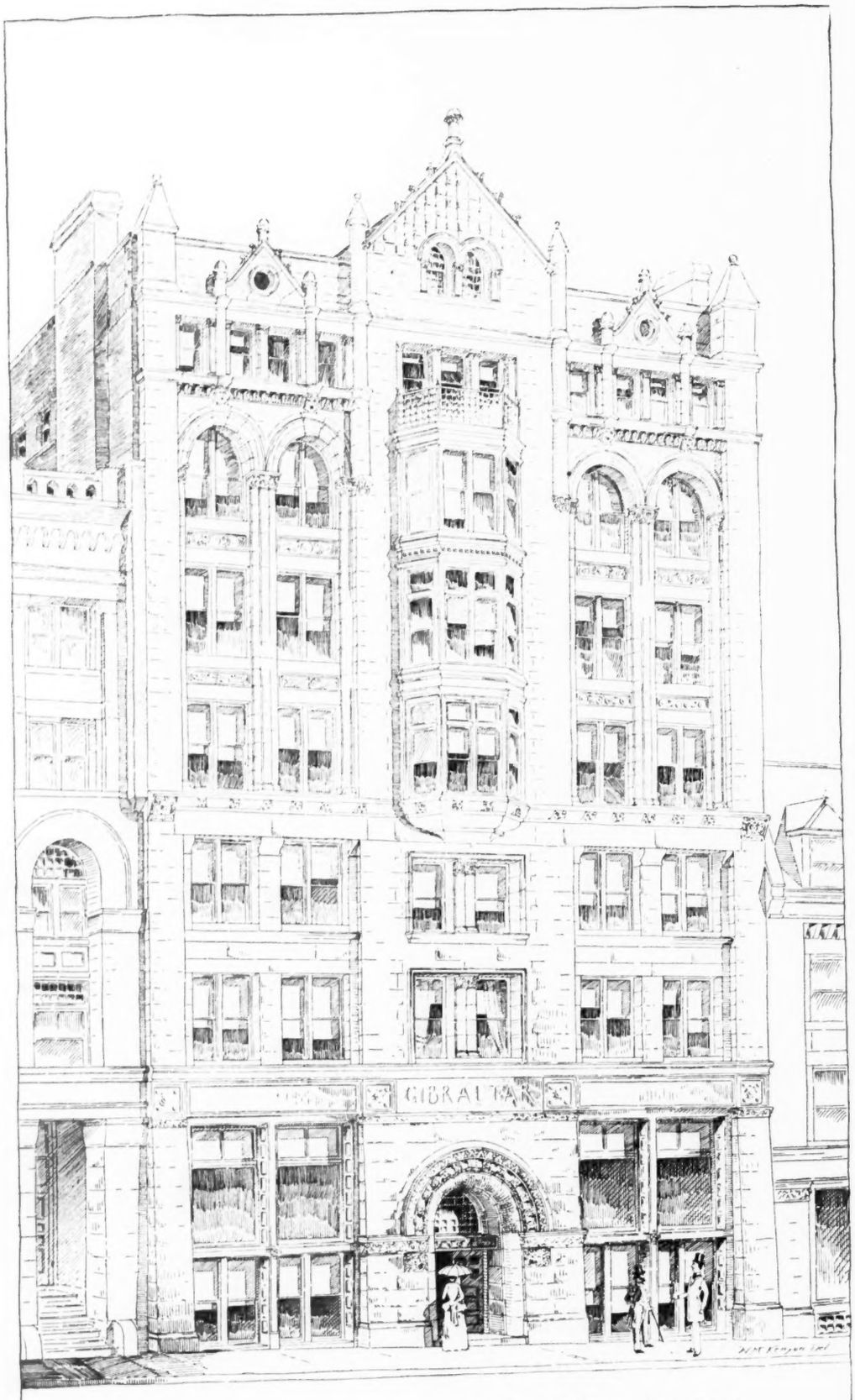
FIRST PLACE—J. A. JOHNSON.



THIRD PLACE—M. G. BEIERL.

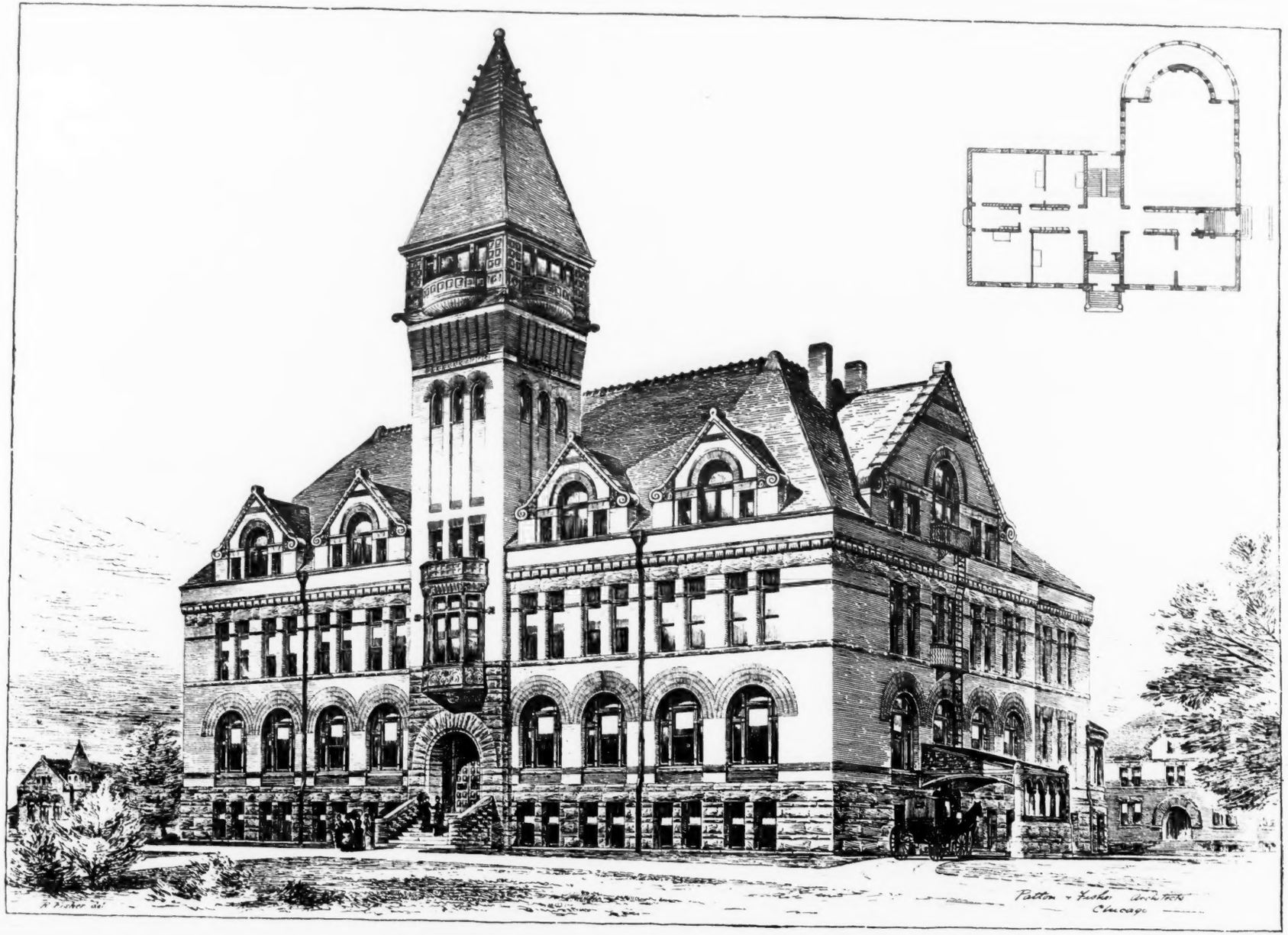
FOURTH PLACE—R. A. GREENFIELD.

BUFFALO ARCHITECTURAL SKETCH CLUB COMPETITION FOR A GATE LODGE.



OFFICE BUILDING.
KANSAS CITY, MO.

VAN BRUNT & HOWE, ARCHITECTS.
BOSTON & KANSAS CITY.



FAIRMOUNT COLLEGE, WICHITA, KANSAS.

PATTON & FISHER, ARCHITECTS, CHICAGO.

RESIDENCE FOR JOHN R. LIONBERGER, ST. LOUIS, MO.

H. H. RICHARDSON, ARCHITECT.

INLAND ARCHITECT PRESS.

PATTON & FISHER, ARCHITECTS, CHICAGO.

INLAND ARCHITECT PRESS.

RESIDENCE OF CHARLES W. CASGRAIN, DETROIT, MICH.

MASON & RICE, ARCHITECTS.

COBB & FROST, ARCHITECTS.

RESIDENCE FOR J. L. McWILLIAMS, CHICAGO.

COBB & FROST, ARCHITECTS.

First Floor Plan.

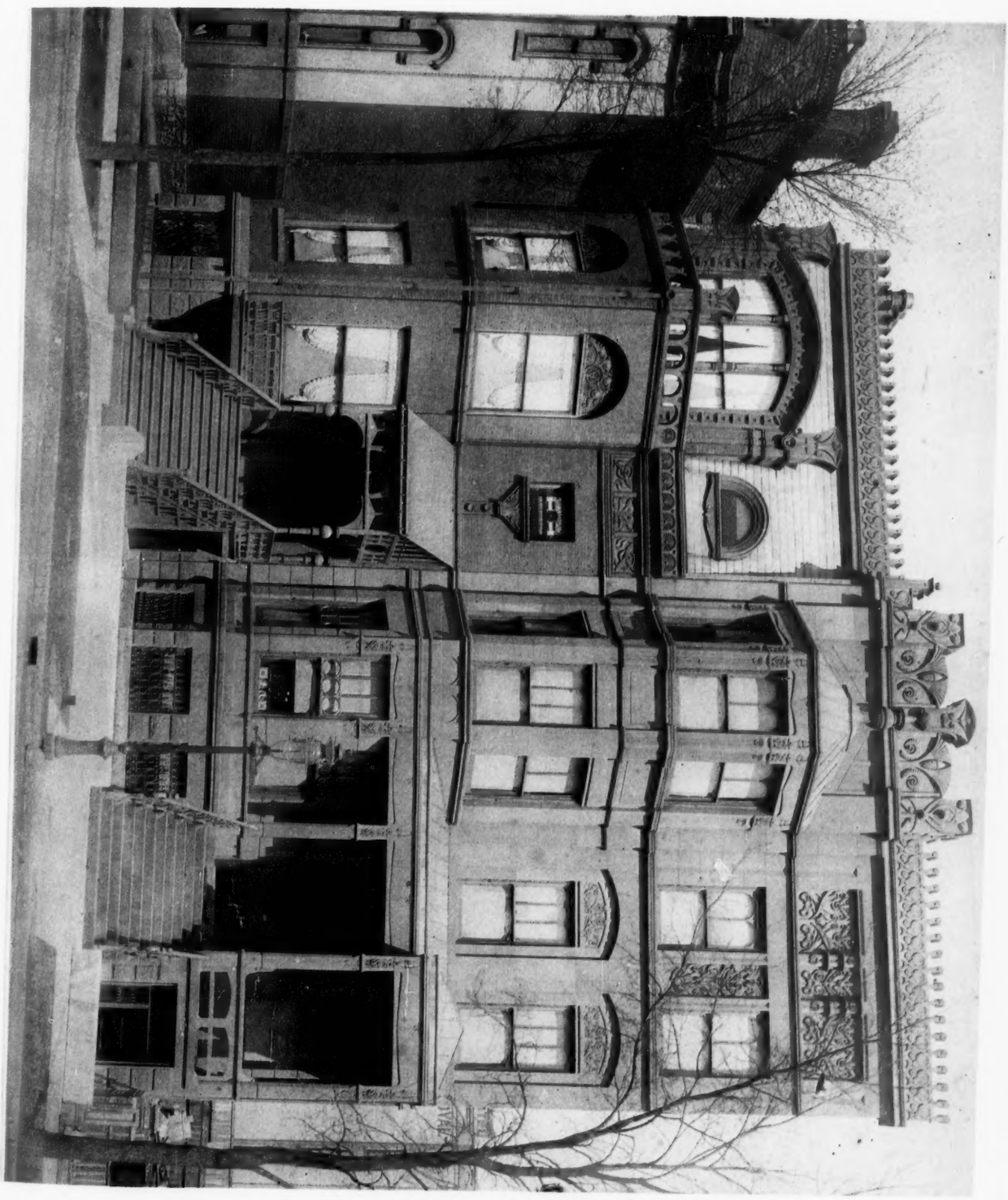
INLAND ARCHITECT PRESS.

From Water Color. INLAND ARCHITECT PRESS.

THE OWINGS OFFICE BUILDING. CHICAGO.

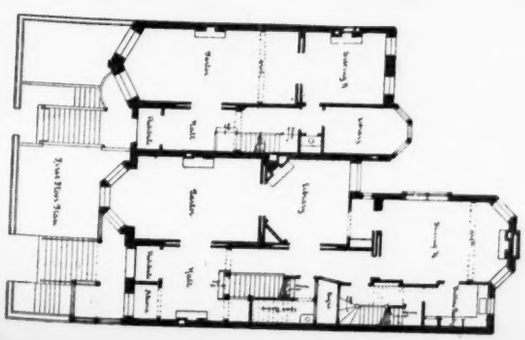
COBB & FROST, ARCHITECTS.

ADLER & SULLIVAN, Architects.



RESIDENCES OF MRS. McCORMICK AND M. SELZ, CHICAGO.

ADLER & SULLIVAN, ARCHITECTS.



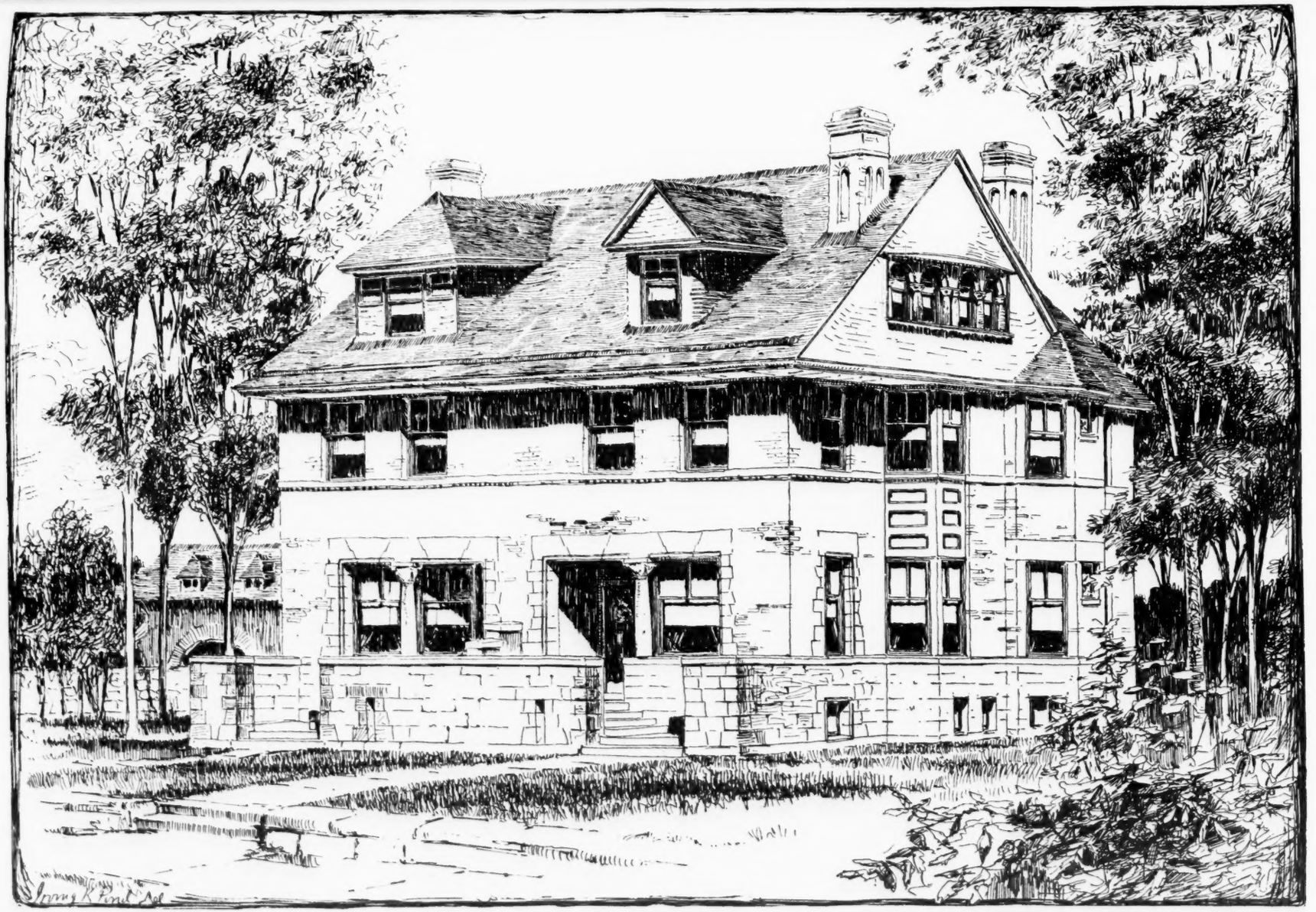
INLAND ARCHITECT PRESS.

HENRY ISAACS, ARCHITECT.

RESIDENCE FOR JOHN DAVIS, ST. LOUIS, MO.

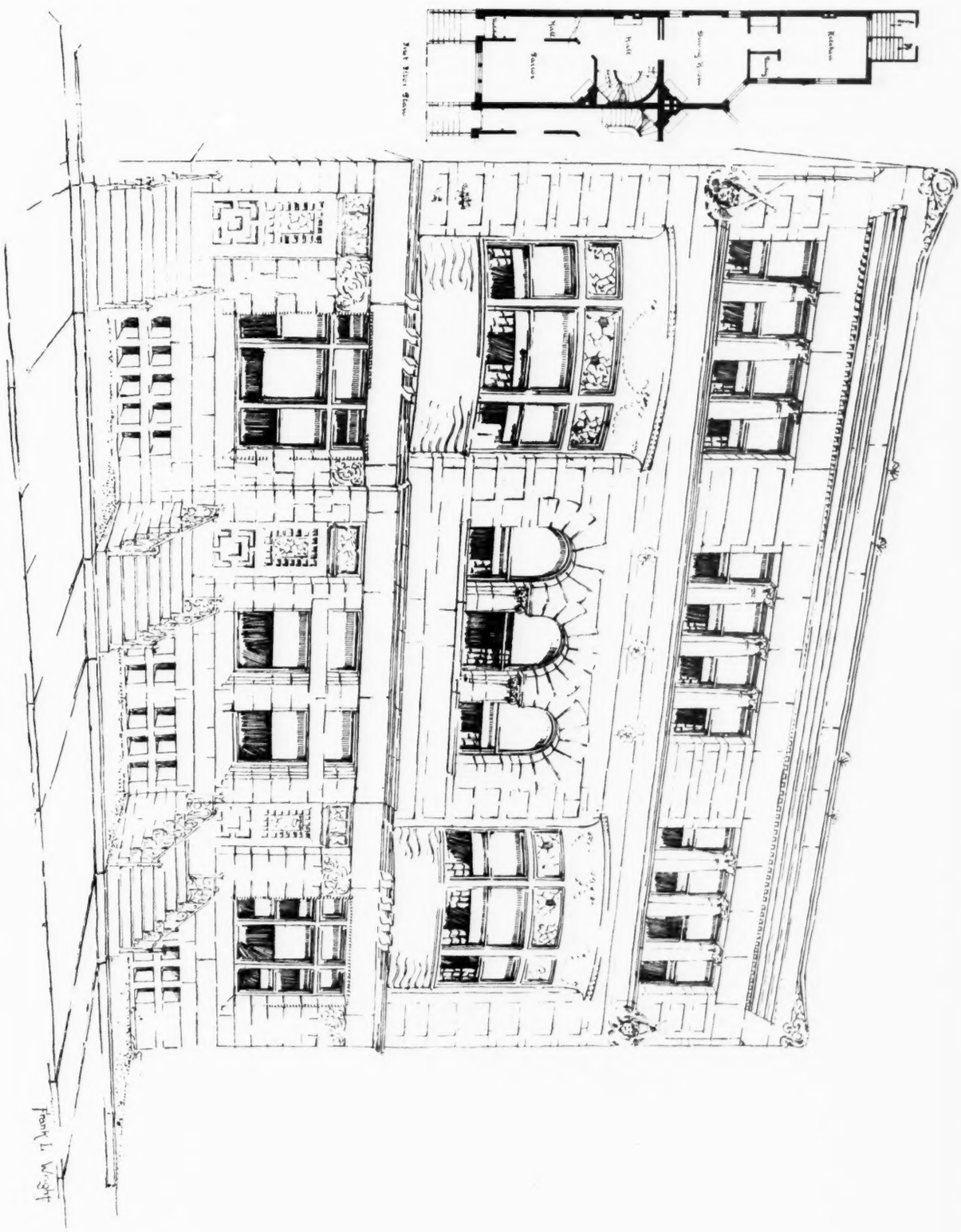
HENRY ISAACS, ARCHITECT.

INLAND ARCHITECT PRESS.



DOUBLE HOUSE AT DETROIT, MICH

IRVING K. POND AND ALLEN B. POND, ARCHITECTS, CHICAGO, ILL.



HOUSES FOR VICTOR FALKENAU, CHICAGO.

ADLER & SULLIVAN, ARCHITECTS, CHICAGO.

Wholesale Stores

Nos 231, 233 and 235 Jackson St Chicago.

for

Mrs E. S Fabian and Estate of Col. W. S. Johnston

S. M. Randolph. Archt.

president instructed the secretary to notify the presidents of the various building associations, requesting them to meet him at the Builders' and Traders' Exchange, to consult upon the rules for obtaining estimates.

The meeting was called May 16. There were present: James John, secretary of the exchange, and the Carpenters' and Builders' Association; E. Baggot and Andrew Young, of the Master Plumbers' Association; M. Benner, representing the iron interest; William Iliff, the masons; P. B. Wight, the fireproofing interests; and William Hearson, the Carpenters' and Builders' Association. The rules were generally discussed, and at a subsequent meeting of the exchange were indorsed by that body.

THE ARCHITECTURAL LEAGUE OF NEW YORK.

The regular reunion and dinner of the association took place May 7. The committee on current work provided for the entertainment and instruction of the league, a conference, by Mr. A. F. D'Oench, superintendent of the department of buildings, of the city of New York, on "Errors in Construction." A representative exhibit of the architectural efforts of the pupils of three of the most important art institutions of this country was a feature of the meeting. These included the technical classes of the Metropolitan Museum of Art, New York; school of mines, Columbia College, New York; architectural department, Cornell University, Ithaca, New York.

Johnstone, Norman & Co., of England, exhibited for the first time the designs of Alma Tadema, R. A., for the piano, and other furniture of the well-known music room in the New York residence of Mr. H. G. Marquand. These remarkable pieces are all in ebony, inlaid with delicately tinted ivories, coral, and mother of pearl, which are introduced in pure Greek lines, with fine artistic effects and results.

DETROIT ARCHITECTURAL SKETCH CLUB.

The architectural draftsmen of Detroit have organized an improvement association to be known as the "Detroit Architectural Sketch Club," for which the constitution and by-laws have been adopted.

At the first semi-annual meeting held Monday evening, May 14, the following officers were elected:

President, J. L. Saunders; vice-president, A. D. Adamson; secretary, C. A. Fullerton; treasurer, J. B. Nettleton. The executive council consists of the officers of the association and three active members, A. Kolm, N. H. Grills and W. E. Pasco.

Meetings will be held regularly every alternate Monday evening.

The club starts out with good prospects and about twenty-five members, with promise of assistance from the architects, the latter being eligible to honorary membership. The methods and objects of the club are the advancement and improvement of its members in subjects pertaining to architecture, by readings, lectures, competitions in design and drawing, visiting selected buildings, etc.

It is hoped that much good may result from the movement. Communications should be addressed to C. A. Fullerton, secretary, 18 and 19 Burns Block, Detroit, Michigan.

Correspondence.

Editors Inland Architect:

I hope these few lines will so far interest you as to receive mention in your paper as a scientific matter, for the benefit of your readers. A long-wanted instrument is one for the purpose of testing air so as to find instantly the amount of oxygen and impurities contained. This instrument is called "Oxometer," and was invented by Wm. Scharnweber, of Chicago. It consists of a little lamp in combination with a thermometer, which indicates the heat by way of combustion. The amount of oxygen in the air will give a certain amount of heat. Air that contains 21 per cent of oxygen is considered pure; if less oxygen is found, there are impurities in the place of it. Therefore, in a room, for instance, where we breathe 16 per cent of oxygen there is 5 per cent of impurities. The kind of impurities is not always important. In one sense, we cannot live longer in nitrogen than in carbonic acid gas or in any other kind of gas. We must have the oxygen to live on, and the nearer we get to 21 per cent in the air the better it is for health. At the present time our systems of ventilation are so wrongly constructed that the average air in dwelling-houses contains about 18 per cent of oxygen, mostly on account of furnaces that consume oxygen. Our office buildings, heated with steam, average 17 per cent of oxygen only, on account of not admitting a sufficient supply of air. Our public buildings and schools are generally found to contain less than 16 per cent of oxygen. This shows that we live too much in impure air. On this account sickness breaks out, such as typhoid and scarlet fevers, and other diseases resulting from poisoned blood. Several schools in Chicago were tested with this instrument: the result at the Thirty-fifth street school was 20 per cent oxygen, 1 per cent impurity; Douglas school, 17 per cent oxygen, 4 per cent impurities; the Brown school, 16½ per cent oxygen, 4½ per cent impurities. These schools were tested by the health department and reported in good condition. Then why should the complaints come so thick from the Brown and Douglas schools on account of sickness? The fault lies in the wrong method employed for analyzing the air. The old way and general way is to search for carbonic acid gas. This is, in the first place, very difficult to do; second, it is only one kind of impurity, where many other kinds of impure air might be present. The best way is to find the amount of oxygen. A test was made last April at the county jail, in the basement, whereby the health department states: "The air was very bad from dead rats and from the leaks in the waste-pipes." Prof. Long, by analysis, found the air there to contain 4 parts out of 10,000 parts carbonic acid gas. His statement was, "the out-door air is 3 parts out of 10,000." By this statement the air in the basement was equal to pure air. At the same time it was filled with other impurities, as shown by the oxometer. Only 19 per cent of oxygen could be found, therefore 2 per cent of impurities were in the basement air. More attention should be paid to ventilation. In general, ventilation is misunderstood. Most people think that the warm air is the impure air and cold air is the pure air. This is wrong. Perfect ventilation is to receive the highest per cent of oxygen in the air we breathe. WM. SCHARNWEBER.

Our Illustrations.

Double house at Detroit, Mich.; Irving K. Pond and Allen B. Pond, architects, Chicago.

Office building, Kansas City, Mo.; Van Brunt & Howe, Boston and Kansas City, architects.

Wholesale stores for Mrs. E. S. Fabian and estate of Col. W. S. Johnston, Chicago; S. M. Randolph, architect.

Houses for Victor Falkenau, Chicago; Adler & Sullivan, architects. Built of blue Bedford stone, copper bays; finished in hardwood; plate glass; cost $24,000.

Buffalo Architectural Sketch Club competition for a gate lodge: First place, J. A. Johnson; third place, M. G. Beierl; fourth place, R. A. Greenfield. Second place was given to the design of F. R. Fuller. It is a well-executed water color, which, while making an attractive picture, unfortunately renders it unavailable for publication.

Fairmount College, Wichita, Kansas; Patton & Fisher, architects, Chicago. This is the main building of a large group designed for a seminary for young ladies, and stands on the brow of a hill commanding a view of the city. Twenty acres or more have been reserved for the buildings and grounds. In the basement there are nine music rooms, laboratory, physical and chemical lecture room, museum, etc. First floor—reception rooms, library and reading room, and four class rooms. Second floor—chapel, secretary's office, and nine class rooms, gymnasium and dressing rooms, with baths in the third story. Materials—stone, pressed brick, terra-cotta and copper. Cost of main building, $50,000; the walls are now up to the roof.

PHOTOGRAVURE PLATES.

(Issued only to subscribers for the Photogravure edition.)

Residence for John Davis, St. Louis, Mo.; Henry Isaacs architect.

Residence for John R. Lionberger, St. Louis, Mo.; H. H. Richardson, architect.

Residence of Charles W. Casgrain, Detroit, Mich.; Mason & Rice, architects.

Residence for J. L. McWilliams, No. 3945 Lake avenue, Chicago; Cobb & Frost, architects.

Residences of Mrs. McCormick and M. Selz, 1715 and 1717 Michigan avenue, Chicago; Adler & Sullivan, architects.

The Owings office building, Chicago; Cobb & Frost, architects. Photograph from water color, by Paul Lautrup. It is to be built on the south-east corner Dearborn and Adams streets, and work has already commenced. Building to consist of cellar and basement, the floor of which is two feet below grade, to be used for offices. Above this are to be bank floors, then eleven floors of offices, making fourteen stories in all. Basement, first and second floors granite; above this, building to be of special made brick and terra-cotta to match the granite; roof, red tile; copper trimmings. Three elevators. Main entrance hallway and main stairs entirely marble, with mosaic floor; all corridors above marble and tile. Building to be constructed of steel and fireproof material throughout, and lighted with electric light.

Obituary.

MR. JOHN N. GLOVER, one of the oldest and most prominent plasterers in Chicago, and a member of the Builders' and Traders' Exchange, was suddenly stricken with paralysis on the 18th ult., near the Grand Pacific Hotel. He was taken to his home, on West Monroe street, where he lingered, unconscious and speechless, until he died, Monday, May 28. Mr. Glover was sixty-one years of age, and apparently hale and hearty.

A delegation from the exchange was in attendance at the funeral, May 31.

At a meeting of the exchange, May 31, the following resolutions were passed:

WHEREAS, Mr. J. N. Glover, a member of this exchange, has been called from works to rewards, therefore be it

Resolved, That this exchange sincerely mourns the loss of one of its oldest and most valued members, whose life and example was such that we can all point to it as worthy of emulation.

Resolved, That we tender to the family of the deceased our sincere sympathy in this their hour of bereavement, and that a copy of this resolution be furnished the family of the deceased and spread upon the records of the exchange.

A New Sanitary Apparatus.

A SANITARY apparatus for use in schoolhouses, etc., where there is no sewerage, or where it is desired to destroy excrement, has been patented and is being placed by Fuller & Warren Company, the well-known furnace manufacturers. This consists of a brick vault the length of the closets, and about three feet deep by two feet wide. The bottom is an iron grate and the top is made of boiler iron, covered with asbestos, and covers for the seats are provided for use when fire is applied. At one end of the vault is a small firebox. A ventilating chimney is connected with the vault, and a current of air is continuous downward through the grated bottom and outward through the ventilating shaft. When a troublesome quantity of matter has collected, the janitor throws a shovelful of ordinary pine, kerosene-soaked sawdust into the pit, sets fire to it, and the flame sweeps through the whole length of the closet and burns up the entire contents, leaving only a few handfuls of light ashes in their stead. The operation of this apparatus is pronounced perfect, and it is claimed will put an end to the evils resulting from soil saturation, sewer gas and the nuisances complained of from defective plumbing. In a pamphlet, "The Ultimate of Sanitation," published by Fuller & Warren Company, Chicago, much valuable information upon the working of this apparatus is given, which certainly seems to have all the elements of a successful aid to perfect sanitation.

Mosaics.

MESSRS. LORD & GRISWOLD have recently furnished St. Lawrence marble for the following residences: G. B. Kane, on Ashland avenue, S. A. Maxwell and Mr. Provoost, by Architect L. B. Dixon; that of Mr. Walker, by Architect A. J. Thain, and J. S. Carter, by Architects Charnley & Evans.

R. H. ROBERTSON, architect, has intrusted to Messrs. J. & R. Lamb, New York, the commission for the furniture for the new Bohemian Presbyterian Church of that city. There are a number of pieces, all of polished oak, richly carved, including a large pulpit, communion table, font, seats, etc. The Messrs. Lamb have also furnished a handsome cover for the communion table. This is of white gros grain silk, beautifully embroidered and trimmed with silk fringe.

IT is pleasing to note the rapid progress being made by our sister cities of the South. In a neat little pamphlet issued by Wm. Aiken Kelly, city assessor of Charleston, S. C., a complete record of the rebuilding of the city since the earthquake is given, showing that 6,956 residences and other buildings have been built or repaired at a cost of $4,294,775. The report also gives the receipts and shipments for the fiscal year, and the outlook for the coming year in all lines of trade.

DRAINAGE of a house is the reproduction, in a neat pamphlet form, of an article on this vital subject, by William Paul Gerhard, C. E., of New York City, originally published in "Homes of Today." A short review would fail to give a just idea of the author's views, and, therefore, it is commended to the perusal of architects who may glean some valuable suggestions therefrom, if they do not get some altogether new ideas. It is certainly deserving of a careful perusal.

MR. JAMES G. WILSON, of New York, manufacturer of the "Rolling Venetian Blind" has perfected it by several important improvements. Instead of stringing the slats, as formely, on single wires, they are now hung in a seven-strand and wire-cable; and instead of the rubber thimbles for separating the slats, metal separators are used, enameled in imitation of the color of the woods used. It is now not only handsomer in appearance, but, in connection with its compactness and convenience, considered indestructible.

THE "Metallic Hip Shingle" is a comparatively recent patented device by W. H. Prentice, for purposes which the name readily suggests. It has received a very flattering commendation from architects who have tested its claims, which are: simplicity and economy; taking the place of boards and strips; making wind, water and snow-tight joints; will not curl or get loose, and has no exposure of nails, besides making a neat and ornamental finish. It may be applied to new or old roofs. The Metallic Hip Shingle Company, of Toledo, Ohio, may be addressed for particulars.

HERETOFORE beams and channels for architectural purposes have not been manufactured in this country west of Pittsburgh, but recently an arrangement has been made with the North Chicago Rolling Mill Company by Clark, Raffen & Company, of Chicago, who are now ready to supply the western market with steel beams and channels. The product of the Chicago mill will be handled entirely by Clark, Raffen & Co. Considerable progress has been made already in the direction of rolling a large stock of all regular sizes, so that all orders can be promptly filled.

THE special attention of readers is invited to a new feature in the manufactures of the Cincinnati Corrugating Company, as shown in another column of this issue. This new departure is the manufacture of corrugated steel arches. They are claimed to be far superior to anything now in use, and will be received by the trade as "a long felt want." The Cincinnati Corrugating Company have unusual facilities for turning out prompt and accurate work, and will gladly give any information desired. It would be well for those desiring to purchase material in their line to correspond with them.

ONE of the latest improvements in building hardware is a novel and very complete blind adjuster manufactured by B. D. Washburn, of Boston, Massachusetts. It is made in three styles; one with holes for wire hoops to catch on the sills, one with an elastic sill catch, and the third with a "secure lock," preventing the possibility of the hook unfastening from its hold on the sill. The maker claims these are the best goods on the market and ten per cent lower, and to support his claim is willing to supply them for use on reputable architect's order with the understanding that they can be returned if they do not prove perfectly satisfactory.

OFFICIAL statistics show the production of building materials in Canada in 1887 to have been as follows: Cement, 69,843 barrels, of a value of $81,909; flagstone, 110,925 square feet, value $10,811; granite, 15,128 tons, value $98,995; gypsum, 154,000 tons, value $155,277; lime, 2,303,667 bushels, value $389,369; marble and serpentine, 242 tons, value $7,845; sand and gravel (exports), 180,860 tons, value $30,307; slate 7,357 tons, value $89,000; tiles, 8,355,000, value $136,112; whiting, 500 tons, value $600. Considering the vast mineral resources of Canada, the production is insignificant; but it is a satisfactory sign that it is yearly increasing.

IT is a common experience that those devices in mechanics which are most valuable are the simplest in construction and material. Retrospect any of the living inventions of the day and note the complexity of the original thought, and then trace them down to where they become practical entities, and you will find, invariably, it is when all the complexities have been eliminated and nothing has been left but "the survival of the fittest" parts. In many instances these desirable ends have been arrived at by what might be termed accident. The "Jenkins' Automatic Air Valve" is in point. "The Jenkins'" packing is familiarly known among steamfitters and engineers. Quite recently, in a special form, it has been applied in the construction of a very simple and reliable air valve, which may be described in a few words, so that a fair comprehension of its *modus operandi* may be had. Consider the valve to be a short cupped tube with a screw-threaded arm for a connection, which is the inlet for the steam. At the lower end of the tube is the outlet, tapped, to connect a drip pipe or cup. In the center of the tube (valve) is a steam chamber in the center of which is a cylindrical "plug" of the Jenkins' packing resting on the "outlet," and set and held in its place by a set-screw operated from the capped end of the tube (valve). This plug is the secret of the valve's automatic action. When the steam is let in the chamber it surrounds it, causing it to expand, and, being screwed down to its seat, when the steam is shut off the plug contracts and opens the valve—that's the whole of it. It will be seen nothing could be more simple, and the action is direct.

A NEW, simple, neat and convenient device—patented in 1886—for locking and holding one-light window sashes in place, at various elevations, known as "Wiggers' Patent Sash Lifters," presents claims for recognition as an utility in house construction which are far from being ignored by builders over the country. It is comprised of a metal strip—steel or brass—molded to fit the bead on the side-roll of the sash, extending the entire length thereof and attached by escutcheon pins. Each strip has four "catches" equi-distant. They are furnished in brass, nickel-plated, enameled, japanned, or unfinished, to be finished in color with the painting of the sash. Brainerd & Co., No. 97 Chambers street, New York, are the manufacturers' agents.

HAYKEN & CO., interior decorators, of which Martin Hayken is the controlling spirit, report their business very good. They have in hand several large contracts, and among them some requiring the highest skill in decoration. The firm also gives careful attention to house and sign painting. They make a special study of each order intrusted to them, always striving to obtain harmonious and artistic color effects. They submit designs and estimates on request, and are conveniently located at 131 Wabash avenue. Mr. Hayken is very favorably known to the building public of Chicago and vicinity through the many important contracts carried out under his supervision; and many prominent public buildings and private residences are examples of his artistic conceptions.

THE question of building in cold weather is natually one of great importance in Scandinavia, and the Stockholm Building Association recently appointed a committee charged with carrying out some test work. This body has had four series of pillars, built of various kinds of brick, stone, mortar and cement, in cold varying from 8° to 15° C., and as soon as the weather has become fairly warm and dry, another series of pillars is to be built, exactly of the same material and in the same manner. Tests of various kinds will then be made with the pillars. It is expected that these experiments will go far to solve this problem. It is also proposed to erect a series of similar pillars during the present or next month, when the weather is warm and sunny during the day, but frosty at night, and compare their solidity with that of the former.

I. P. FRINK recently received the following letter in regard to the merits of his methods of lighting a large auditorium:

NEWARK, N. J., March 31, 1888.

Mr. I. P. Frink, 551 Pearl street, New York:

DEAR SIR,—The members of the Building Committee of the Centenary M. E. Church take this occasion to express to you their appreciation of the efficient manner in which you lighted the main audience and lecture rooms of their new church, and have no cause to regret having left the entire lighting of the church to your judgment. The large reflecting chandelier, with its one hundred and thirty imitation candle gas burners, lighted with an electric spark, thoroughly illuminates the main audience room so that the finest print can be read in the most remote corner of the room, with a light that is agreeable to the most sensitive eye; the fixture is of a beautiful design, harmonizing with the architecture, and is second to no other feature in decorating and furnishing the church. Those in the lecture room are equally satisfactory. There is absolutely nothing to criticise in the design, quality, finish, lighting capacity, or the time taken to finish the work.

Very truly yours,

J. K. OSBORN, *Chairman.*

A RECENT number of the St. Paul *Globe* says: "After a full and deliberate consideration of the merits of the various grates, it was moved by Mr. Dawson that the bid of J. F. Tostevin for ventilating grates be accepted. The motion was unanimously carried. Mr. Tostevin is agent for the Edwin A. Jackson & Bro. grate. His bid was the highest, but the commission was of the opinion that the Jackson grate was the cheapest for the money." The contract alluded to was for over one hundred grates for the new county court house at St. Paul, Minn. In the contest there were the exhibits of Edwin A. Jackson & Bro., of New York, manufacturers of the Jackson ventilating grate, of W. H. Jackson & Co., who represented the Jackson sanitary grate of the Omega Grate Company, who showed the Omega fireplace furnace; also of the Hess Grate Company, of Chicago, and the Miller Grate Company of one of the North American cities.

THAT the architectural iron, brass and bronze work is making rapid progress in this city is evidenced by the fact that the well-known Winslow Bros. Co. have been obliged to remove their works from West Monroe street to larger premises at 376 to 396 Carroll avenue. The new buildings erected by this firm are complete in every particular, the drafting and pattern-making rooms are large and well lighted, and every new device or improvement to carry on an extensive business has been put in requisition. This is especially true in regard to the apparatus for Bower-Barffe work, which the Winslow Bros. Co. not only use for their own work, but execute for others at custom rates. The latest improved Butnam boilers furnish the steam for a powerful Eclipse engine, which supplies the motive power for the entire works. This change of location will enable the Winslow Bros. Co. to carry on their extensive business with much greater facility and promptitude.

A SYSTEM of fireproof construction, which has been patented in London, is described by the *British Architect*. In this latest method the floors consist of a series of small arches, formed of lengths of rolled steel of quadrant section, riveted together at the top through flanges, the arches being similarly connected at the springing. Over these arches is laid a bed of concrete, in which the joists which carry the floor are imbedded. This gives a very strong fireproof floor with a small depth. The under side can be finished with a flush ceiling, instead of one broken up by beams projecting below the ceiling, as at present in ordinary construction, where very long and wide floors are to be supported by heavy girders. This principle of arched flooring is also specially applicable to bridge

decking in engineering construction, for which purpose it is already being employed. The fireproof columns are formed of four quadrantal segments of rolled steel, similar to those used for the floors, with an inner central steel stanchion tied to the outer shell, the intermediate space being filled in with concrete, and the whole forming a compound column. Should the outer shell be destroyed by fire, the patentee claims that the inner stanchion will still be preserved intact and will continue to carry its load with safety.

MERCHANT & Co., of Philadelphia, have just issued the third edition of their valuable pamphlet, "Important to All Interested in Good Roofs," which in concise form gives a number of facts about the manufacture and relative values of roofing plates and the laying of a good roof. This roofing plate concern is not only making a strong effort to place the merits of their brands of tin-plate before the architects of the country, but seek to point out to architects and owners the danger of accepting bids for tin roofs without thoroughly investigating the quality of the tin and the reputation of the house selling it. They charge that the disrepute into which tin roofs have fallen in some localities is due to the use of a poor quality of tin furnished by unscrupulous contractors, and state that a tin roof should last forty or fifty years. The printed matter circulated by this house is full of valuable general information upon the subject of tin roofs, and, like the pamphlet noticed, should be read by every intelligent architect.

THE initial number, Vol. 1, No. 1, under date of May 1, of a new specialty journal, bearing the title *Stone*, is received. It is published at Indianapolis, in the interest of producers, workers and users of stone, marble and granite; D. H. Ranck is managing editor; L. H. Gibson, editor. The *debutante* makes its bow with a prospectus, followed by twenty-six pages of reading matter and illustrations, the principal illustrations being the accepted design of the Indiana Soldiers' and Sailors' Monument, and a proposed monument to Audubon, to be erected in Trinity Cemetery, N. Y. The other illustrations are of capitals, panels, rosettes, crockets, finials, etc. A price current closes the number. As a work of the typographic art it has nothing to boast of; but, no doubt, will improve in this respect The number before us is quite readable. The field is new, and we hope it will prove one that will return a rich harvest to the publishers who have entered it. We welcome the *Stone* among our exchanges. Terms $2 a year in advance.

J. DUNFEE & Co., Chicago, have fitted up their new showrooms, in a manner that well illustrates the popular liking and use of "wood carpets," so extensively manufactured at Nos. 204-212 South Clinton street, by this firm. It is a beautiful exhibit, one that merits the many calls of inspection that are paid to it daily. Not only is the floor covered with the rich parquetry, but the walls also, the elaborate effect being made up of as many as twenty-five different ornamental designs in woods, at prices ranging from 11 to 50 cents per square foot. Among many recent Chicago orders, besides extensive ones to the East and elsewhere, are those for the residences of F. C. Pope, W. W. Wilcox, J. E. Miller, J. P. Odell, W. H. Austin, J. H. McGay, the Bundy House, Mr. Clawley, while the firm's branch houses at Milwaukee and St Louis are equally busy. The showrooms are at Nos. 104-106 Franklin street, corner of Washington, where resident architects and those visiting the city can see at a glance the possibilities of wood carpet and parquetry flooring.

A VISIT to the works of the Western Sand Blast Co., corner of Clinton and Jackson streets, Chicago, is full of interest to one not acquainted with the process by which the most elaborate designs are engraved upon glass. Briefly, the process is this: a plate of glass is covered with a thin layer of tin foil; on this the design is traced and then deftly cut and lifted out, leaving the remainder of the foil intact. In this condition the plate is given a thin coating of melted wax, and before this is too much hardened the rest of the foil is stripped off, which leaves the design clear cut in wax on the plate. The plate is then put into a huge box filled with machinery, where the sand blast acts upon the glass, cutting all the surface not protected by the wax, and bringing out the design perfectly. Another interesting department is that devoted to beveling and polishing glass. Intimately associated with the Western Sand Blast Co., is the Brown Bros.' Manufacturing Co., manufacturing, at the same location, Hyatt's Patent Prismatic "Cement and Lead Band" sidewalk lights, and vault lights. Both establishments are complete in their facilities and highly prosperous. Edwin Lee Brown, the president of both companies, is one of the most public spirited citizens of Chicago.

THE secretary of the Cincinnati Corrugating Company has been sending out a timely circular to builders, mechanical engineers and their correspondents generally over the country. As it contains many useful and practical suggestions, a few extracts from it are made for the benefit of readers. The circular says:

> First inviting your attention to the fact that the regular lengths of corrugated iron which we carry in stock are 5, 6, 7, 8, 9 and 10 feet, we note that, almost invariably, architects and mechanical engineers, in specifying lengths of corrugated sheets, or spacing supports therefor, on iron framed roofs, name lengths which are different from those carried in stock, obviously necessitating delay and often greater cost, as in such cases the required lengths must either be rolled specially or cut from stock lengths which are carried by all the larger makers of corrugated iron We judge that in planning disposition of purlins or other supports for the corrugated sheets, the rule seems to be to place them equally distant between centers. But why would it not be as well from any standpoint, or, better, for reason previously indicated, to plan to use regular lengths, not necessarily using one length only on each roof, but any regular lengths, or such as can be cut therefrom with least waste? There is far more corrugated iron now used on wooden than iron framing, and the use, generally, of corrugated iron, is very largely increasing, hence considerable stocks of regular lengths and of the different gauges (Birmingham-Haswell) are kept at different points throughout the country, we having today over one thousand five hundred tons in stock. Our corrugated iron is made under a press, and not by rolling, as is usual; is coated with the best metallic paint thoroughly reground in pure linseed oil, and the 2½ inch corrugated sheets are all provided with our patent edge corrugations, explained in our catalogue, pages 9 and 22, making them unequaled for effectiveness.

AMONG American sculptors Franklin Simmons is now the most celebrated in Rome, says an exchange. He has resided there for a quarter of a century, during which time he has executed many orders from this country. His latest work is a seated statue of the poet Longfellow, of heroic size, which is designed for the city of Portland, Me., the place of Longfellow's birth. At a recent reunion in the sculptor's studio, this statue was on exhibition, and it was universally adjudged to be one of the most successful of Mr. Simmons' works. A son of the poet asserts that it is the best likeness of his father in existence. Mr. Simmons has executed portrait busts of many distinguished Americans: Grant, Sherman, and quite recently of Marion Crawford, the novelist, besides statues of Washington, Roger Williams, Governor King and Senator Morton. He is best known to our people probably by the naval monument at Washington. During the present century America has been more ably represented by her sculptors in Italy than any European nation.

THE following circular, received from the well-known Smith & Anthony Stove Company, of Boston, announces such an important acquisition to their already large business that we publish it in full, knowing that it will be of interest to readers:

IMPORTANT CONSOLIDATION.

48, 50, 52 and 54 Union street, Boston, April, 1888.

We have acquired all the patterns, stock and good will of the old established firm of F. Morandi & Son, 48 and 50 Union street, Boston, which includes all the patterns of the celebrated Whitely ranges, ovens, kettles, etc., formerly made by the well-known house of E. Whitely & Co.

The business of F. Morandi & Son will in the future be consolidated with ours, making us the largest manufacturers of high grade hotel and restaurant goods in the country.

We have taken their store and it will be joined to ours, giving us an unrivaled sample room for the display of the Hub stoves, ranges and furnaces, as well as the hotel specialties we have added to our line.

Mr. Ernest L. Morandi will have charge of the hotel and restaurant department, and we are prepared to estimate on kitchen outfits, from the smallest restaurant to the largest hotel or public institution.

The reputation of F. Morandi & Son and E. Whitely & Co., for fine work, and for skill in planning culinary arrangements is excelled by none, and this, added to our own increased facilities, enables us to guarantee promptness and satisfaction in this department. Our ample resources will enable us to enlarge the line of goods, adding every improvement that is desirable, and giving our patrons an assortment combining the best and newest constructions at the lowest possible prices.

It is our purpose to make this branch of our business superior to any other house in the trade, and the headquarters for every requisite in its line.

We shall carry a full line of repairs for all the above goods, and can fill orders for these promptly.

You are invited to inspect our warerooms, and all applications for catalogues, prices, etc., will receive our best attention.

Anticipating your orders in this department, we remain,

Very respectfully yours,

SMITH & ANTHONY STOVE COMPANY.

Railroad Notes.

THE Great Rock Island (C. R. I. & P. R'y) offers a choice of routes beyond Missouri river, on both single and round-trip tickets. First-class excursions every week. Rates as low as the lowest. Trains composed of elegant day coaches, superb dining cars, magnificent chair cars and Pullman palace sleeping cars. For full information, address E. A. Holbrook, G. T. & P. A., Chicago, Ill.

JOHN MCGLENSEY, of New York, a popular member of the National Association of Builders, and J. A. Jarvis, of New York, recently visited Chicago, and made a flying trip to St. Paul and Minneapolis. They went by way of the Wisconsin Central, and appreciated the elegant dining-car service on that line. Returning, they were so fortunate as to secure passage on the trial trip made by the Chicago & North-Western vestibule train, the appointments of which, as well as the trainmen in charge, awakened the enthusiasm of these New York gentlemen. While in the city, Mr. McGlensey spent the time in seeing everything, from the boulevard system and office buildings to the stockyards, and expressed themselves as having seen the *next* great city to New York.

MAGNIFICENT vestibule express trains, built expressly for this service, with all the latest improvements, now run daily each way between Chicago and Council Bluffs, over the great Rock Island route, time sixteen hours. This is a splendidly appointed series of continuous parlors on wheels, including elegant dining and palace sleeping cars. No noise, no dust, no swaying of coaches, no cold drafts of air, no slamming of doors, but restful comfort the entire journey. No potentate of the Old World travels in a more princely style, or commands greater luxuries or more of them than those going west can now enjoy, if ticketed to or from Council Bluffs via the great Rock Island Route. This train also connects at Omaha with the "Overland Flyer," going through to and from Chicago and San Francisco, Portland, Oregon, and Los Angeles, in eighty-seven hours. Tickets and rates by the Rock Island Vestibule no higher than are charged by lines having greatly inferior accommodations.

Two books that are well worth an hour's perusal by anyone who feels the effects of a hard season's work and would "take a rest if they only knew where to go," are published by the Wisconsin Central and the Northern Pacific Railway Companies. Profusely illustrated and well written, they describe pleasantly and clearly the picturesque country accessible between Chicago and the Pacific Coast. The Wisconsin Central route is, of all the northern roads, the most popular with fishermen and pleasure seekers generally. It scarcely leaves the city before the wild woods, myriad lakes and stretches of prairie of Lake county are passed, and at each station conveyances are in waiting for expected passengers, showing that this is the great thoroughfare used by those who love a day in the country with rod or gun. The evening train leaving the city at 5 P.M., Saturday night, is always crowded with gentlemen and a fair proportion of ladies, too, seeking Lake Villa, Antioch or some other of the dozen popular resorts in Lake county. Then, for longer trips, the road runs through the State of Wisconsin, from south to north, and bringing those in search of health to the far-famed Waukesha, or to the newer, but as attractive resorts farther north, till the region of Lake Superior is reached. Here the trout streams rival any in the country. In the small lakes that stretch out in chains through the vast pine forests the "gentlemanly" black bass and the "kingly" muskallonge are found in greater quantities and grow to greater size than at any other known spot. The line connects with the Northern Pacific at St. Paul, which carries the traveler into the "wonderland" of the West. Architects seeking rest cannot do better than send to the Wisconsin Central offices, Chicago, and obtain copies of "A Summer

Jaunt" and "Wonderland." The statements they contain fall far short of actual experience in praise, and are truthful in their description of the different places that attract the traveler en route.

DURING the season, June 1 to October 1, a full line of tourist and cheap excursion tickets, via Chicago & Grand Trunk Railway, will be on sale in Chicago at 103 South Clark street, Palmer House, Grand Pacific Hotel, depot, corner Dearborn and Polk streets, and at principal offices in the country, by which all seaside and mountain resorts in the East can be reached at very reasonable rates of fare. The route of these tickets is by the Chicago & Grand Trunk Railway from Chicago, thence by Grand Trunk main line, via Toronto, or by Great Western division, by way of Niagara Falls; or both Niagara Falls and Toronto may be visited on the same trip, connecting with steamers on the St. Lawrence river, passing by daylight the Thousand Islands and wonderful rapids of that noted stream, and under the world renowned Victoria Bridge, to Montreal; thence to Quebec, River Saguenay, of the grandeur and solemnity of whose scenery no words can convey an adequate idea; White Mountains, Lake Champlain, Lake George, Saratoga and Hudson river; or via Portland, the noted Casco Bay and watering places on the Atlantic Ocean beaches in that vicinity. Be particular to have your tickets read from Chicago by the Chicago & Grand Trunk Railway, which line passes through the finer portions of Michigan. Its track is entirely steel rail, well ballasted, rivaling in smoothness its older competitors; its passenger coaches are of superior style and finish, combining all the latest improvements for the comfort and safety of its patrons. Passengers for Canada now have their baggage examined, passed customs and checked to destination at our depot in Chicago, thereby avoiding annoyance or delay at the Canadian frontier. Berths in the sleeping cars and full and perfect information can be secured at 103 South Clark street, 110 Washington street, Palmer House, Grand Pacific Hotel, and at Dearborn Station, corner Dearborn and Polk streets, Chicago.

Building Outlook.

OFFICE OF THE INLAND ARCHITECT,
June 10, 1888.

Speaking in a general way, the volume of business so far this year has been 10 per cent less than the volume up to this time last year. This alone, in view of the great increase in machinery, and in manufacturing capacity, is sufficient to impart to prices a downward tendency. A further depressing tendency was given by the falling off in railroad building by the apprehension among the people generally that they were going too fast, by the tariff agitation, regardless of its wisdom or unwisdom, and by some less discernible influences, all of which, in a cumulative way, have kept prices gently receding, in spite of the powerful trade and manufacturing combinations that have arisen, like the brigades and divisions in war times, to protect assailed rights and interests. The general impression is that less building, less manufacturing and less exchanging will be done this year than last, and it is true that all the indications point that way. This need be no cause of disappointment except to those who in consequence will have no business to do or less to do. The downward tendency in prices will probably continue until fall. So far as political influences affect trade, if they really do affect it, that factor will be eliminated. The season can be safely discounted now by those who have no blending interests at stake. The house builders are doing less in cities but more in country districts. Building material is in active demand and mainly at the prices realized last year. The distribution of white pine, west and east, will come up pretty near to last year — high water mark. Yellow pine is steadily gaining ground even in white pine territory, and so are the hardwoods from all sections, especially those from the South. The great lumber interests have nothing to complain of. The mills are busy. Prices are remunerative. New mills are springing up in new places and the markets are steadily widening. The downward tendency in prices is well-nigh universal, so that no pronounced injury is done. A dollar buys as much this year as last and more. Manufacturing capacity is restricted in part and there is a healthy and wise coöperation by which the channels of trade will not be gorged with unsalable products. Trade management is being centralized, but for wholesome purposes for the most part. It is being demonstrated that trade and manufacturing combinations cannot permanently crowd prices above fair limits. There seems to be exceptions to this rule, such as the French Copper Syndicate, the Sugar Trust and some lesser combinations, but the people are not through with these comparatively new forms of attack on the best interests. The expansion of industrial activity in the southern states is the historic panorama of the hour; vast sums of money are seeking employment there, and what would otherwise develop, a partial industrial depression prevents by drawing capital and labor into new and inviting fields. The iron trade is in an unsettled condition, but iron and steel buyers are profiting by it. All mill and furnace products are as cheap as they ever were in our history. Virginia and Alabama irons are displacing Pennsylvania and Ohio irons in northern markets, and the end is not in sight. The locomotive works, car works, machine, boiler and engine works and electrical establishments of the country, are all busy, many of them overcrowded with orders. The textile interests are suffering a reaction and tariff agitation is causing some unnecessary apprehension among eastern manufacturing interests. The western manufacturing establishments, and mills and shops, big and little, are fairly well employed. Each line is being fully developed, new economies are being developed, and new systems of work are finding recognition in place of older and more costly.

The business men of the nation, its workers by hand and brain, are all anxious for the early disposition of purely political issues. There is abundant and anxious capital awaiting the word of command. The present temporary dullness will work out good results. The downward tendency in prices will continue as it should until all inequalities in trade and manufacturing are removed. Speculative land values have largely disappeared, the industries have been better organized, and the country is now or by next fall will be, in a better condition than ever to enter upon the race of progress and development which the genius of the people has made possible and inevitable.

Synopsis of Building News.

Arkansas City, Ark.—The J. B. Legg Architectural Co., of St. Louis, Mo., have prepared plans for a five-story stone and granite hotel building, 80 by 100 feet; all modern improvements; cost $115,000.

Atlanta, Ga.—Architects Bruce & Morgan report: For City of Atlanta, two-story brick and stone school building, 72 by 80 feet, slate roof; cost $18,700; John Bishop, contractor. For Samuel W. Good, two-story frame residence, 50 by 60 feet; cost $5,000; contracts not let.

Bancroft, Mich.—Architect Claire Allen, of Ionia, reports: For school board, two-story brick and stone school building, 47 by 57 feet; cost $5,000; under way; William Wood, builder.

Belding, Mich.—Architect Claire Allen, of Ionia, reports: For Belding Mfg. Co., 185 Fifth avenue, Chicago, two-story brick and stone factory building, 336 by 146 feet. Three freight elevators, steam heat, galvanized iron cornices, etc.; cost $30,000; under way; Prall & Huntley, masons; carpentry contract not let yet.

Bellaire, Ohio.—Architect E. W. Wells, of Wheeling, W. Va., reports: For First M. E. Society, church building, to cost $9,000.

Birmingham, Ala.—Building business very quiet. Outlook for this year, very poor.

Architect Ed. Sidel reports: For Caldwell Hotel Co., six-story hotel building, 135 by 144 feet, Philadelphia pressed brick, terra-cotta, stone and iron, tin roof; cost $300,000; under way; individual contracts. For Josiah Morris & Co., of Montgomery, five-story office building, 100 by 182 feet, pressed brick, terra-cotta and iron, asbestos roof; cost $275,000; under way; individual contracts.

Buchanan, W. Va.—Architect E. W. Wells, of Wheeling, reports: College building, to cost $25,000.

Cape Girardeau, Mo.—The J. B. Legg Architectural Co., of St. Louis, have prepared plans for Dr. W. B. Wilson, for a three-story brick and stone store, office and Masonic hall building, 30 by 50 feet; cost about $15,000. Also prepared plans for a two-story brick and stone court house, 40 by 60 feet; cost $25,000. These plans have been sent to Judge Houck, Cape Girardeau.

Chester, Ill.—Architect C. B. Clarke has prepared plans for a four-story store and opera house, to cost $20,000; Richard Shinnick contractor.

Chicago, Ill.—While it must be admitted that the first five months of the year have not developed as great an amount of building as the more sanguine in the trades predicted, it is indeed gratifying to find, by comparison, that both in the number of permits issued and the amount of money expended in buildings up to June 1, the year 1888 not only compares favorably with other years but exceeds 1887, as shown in the following statement from the city building department: Number of permits issued January 1 to June 1, 1887, 1,527; cost of buildings, $8,880,000. Number of permits issued from January 1 to June 1, 1888, 1,738; approximate cost, $10,050,000. When it is taken into consideration that the bulk of this year's business is not to be shown in half a dozen large office buildings, but is made up of substantial residences in various portions of the city, and a much better class of store and flat buildings than has ever before been built, it must be acknowledged that it has, so far, been a grand year of improvement, and that an immense amount of building has been done in all portions of the city. In speaking of the outlook, our architects predict a very good fall business, and many of them show big projects not yet fully developed. It will not be at all surprising if, on January 1, 1889, we find that the year 1888, notwithstanding the usual drawbacks of "presidential years," has exceeded any previous year in the matter of money expended in building. The demand for frame houses in the suburbs is largely on the increase, and these range from $2,000 to $20,000 in cost. It is also noticeable that many Chicago architects are serving a very good out-of-town patronage.

Architect H. S. Jaffray reports: For E. Buckingham, Connecticut brownstone portico and steps to residence, corner Twenty-first street and Prairie avenue; cost $3,950; Mortimer & Son, contractors. For P. Quill, three-story brick and stone flat building, 23 by 60 feet, 101 South Sangamon street; cost $5,500; under way. For Henry Abrahams, two-story brick and stone flat building, 43 by 42 feet, on Wood street, near North avenue; cost $5,000; under way; Conrad Kies & Son, masons; James Dohm, carpenter. For same, three-story stores and flats, 50 by 80 feet, on corner of North avenue and Wood street; St. Louis pressed brick and Michigan greenstone; cost $13,000; under way; same contractors as on above building.

Architects Cobb & Frost have prepared plans for the Owens office building, to be erected on the southeast corner of Dearborn and Adams streets. Building to consist of cellar and basement, the floor of which is two feet below grade, to be used for offices. Above this bank floors, then eleven floors of offices, making fourteen stories in all. Basement, first and second stories granite; above this to be of special made brick and terra-cotta to match the granite; red tile roof, copper trimmings; three elevators. Main entrance, hallway and main stairs to be entirely of marble, with mosaic floor; all corridors above to be of marble and tile. Building to be constructed of steel and fireproof material throughout; electric lights; cost about $300,000.

Architect Clarence L. Stiles: For Davis & Rankin, six-story brick and stone warehouse, 201 by 142 feet, corner of Lake and Peoria streets; cost $125,000. For C. Smith, block of brick and stone flats, corner of Western and Wilcox avenues; cost $22,000. For Manual Training School, Elgin, Ill., three-story brick and stone building, 30 by 60 feet; cost $8,000. For Mrs. Munsill, at Hartford, Conn., two-story and cellar brick and stone residence, 44 by 70 feet; cost $30,000.

Architect John F. Warner has prepared plans for a residence for J. McDonald, 32 by 68 feet; cost $25,000. For D. Brougham, block of stores and flats; cost $8,000. For J. W. McFarland, residence; cost $5,000. For Beckwith & Fleming, block of brick and stone flats, 70 by 60 feet; cost $20,000. For A. D. Jones, store and flats, 24 by 72 feet; cost $8,000.

Architect L. Martins has plans for J. E. Woodruff, for a three-story block of brick and stone stores and flats, 192 by 86 feet; cost $65,000. For B. Halley, four brick and stone residences, 40 by 53 feet; cost $20,000. For A. J. Torler, two two story brick and stone dwellings, 44 by 55 feet; cost $9,000.

Architect George Beaumont reports: For Jacob Mayer, two-story and basement brick and stone residence, 22 by 58 feet, at 3560 Vernon avenue; cost $6,000; J. M. Darling, mason; F. Blair, carpenter. For Hugh Daley, two-story brick and stone flat building, 24 by 65 feet, 3014 Indiana avenue; cost $6,000; Voght & Douglas, masons; Danly & Hass, carpenters. For C. W. Nichols, two-story attic and basement residence, 24 by 75 feet, Twenty-ninth and Prairie avenue, two fronts of granite; cost $12,000; under way; C. Farr, contractor. For W. J. Mayer, two two-story and basement and attic brick and stone residences, 50 by 75 feet, corner of Ashland avenue and York street; cost $30,000; letting contracts. For A. H. Lowden, three two-story and basement and attic stone front dwellings, 74 by 68 feet, Thirty-sixth street and Prairie avenue; cost $21,000; day work.

Architect Jul de Horvath of Normal Park reports: For Ben Timmerman & Co., 600 South Morgan street, Chicago, three-story brick, stone and terra-cotta store, flat and hall building, 100 by 93 feet, corner of Seventy-ninth and Sherman streets; cost $30,000; contract to be let June 14. For same, four-story brick and stone store and hotel building, 125 by 125 feet, corner of Sixty-third street and Stewart avenue; cost $36,000; to be commenced about August 15. For C. S. Redfield, two-story and attic brick veneered residence, 41 by 52 feet, in Auburn Park; cost $11,000; under way; George & Young, builders. For John M. Young, frame residence, 32 by 52 feet, at 6624 Howard street; cost $6,000; under way; George & Young, builders. For John M. Young, frame residence, 32 by 52 feet, at 6624 Howard street; cost $6,000; under way; George & Young, builders. For A. Berend, two-story frame flat building, 24 by 56 feet, Honore street, Englewood; cost $3,000; under way; T. M. Mark, builder. For D. V. Bussie, two-story brick store and flat building, 25 by 60 feet; cost $4,600; under way; D. V. Bussie, builder.

Architect C. M. Palmer has prepared plans for J. P. Dodge, three-story and basement brick and stone residence, 30 by 72 feet; cost $20,000.

Architects Burnham & Root have prepared plans for J. J. Hoch, for a $15,000 residence; also one for H. Pennoyer, and one for Max Meyer.

Architects Addison & Fiedler have prepared plans for the Germania Club for a four-story pressed brick and brownstone club house, 100 by 150 feet; cost $100,000. For J. P. Bartlett, two-story brick and stone store and flat building, 31 by 96 feet; cost $15,000.

Architects Flanders & Zimmerman have under way for D. F. Crilly, a three-story store and flat building, 210 by 75 feet; cost $75,000.

Architect F. Foehringer has plans for Henry Rumsfield for a five-story apartment building, 72 by 75 feet; cost $40,000.

Architect Julius H. Huber has plans for J. Peterson for a two-story brick and stone residence, 25 by 62 feet; cost $6,000. For the McGuire Manufacturing Company, brick factory building, 61 by 105 feet; cost $6,000.

Architect J. Speyer has opened bids for a flat building for D. Delaney, Center avenue and Taylor street; cost $15,000. For John McAffrey, four two-story buildings at Chicago Lawn. For M. Flanley, three-story store and office building, 50 by 100 feet, Forty-first and Halsted streets. For R. Smith, remodeling, three-story and basement building on South Desplaines street. For T. L. Kelly, three-story and basement building on corner of Fifty-seventh and Halsted streets. For Adam Fyfe, three-story store and flats on Harrison near Loomis street. For J. Sontag, two-story and basement addition to Humboldt house, Lake View. For P. White, remodeling residence on Indiana

avenue near Thirty-fourth street. For J. Healey, residence on Indiana avenue near Thirty-first street. For Lazarus Silverman, four two-story flats on Archer avenue.

Architect W. L. Carroll has plans for a four-story stone front flat building, 22 by 100 feet, for M. McKay; cost $15,000. For L. Wickman, two two-story stone front dwellings, 32 by 65 feet; cost $12,000.

Architect J. M. Van Osdel, Jr., reports: For the La Salle Club, a two-story and basement brick addition, 46 by 100 feet, to club house. The addition will contain bowling alley, billiard room and large assembly hall; cost $12,000. For Joel Bigelow, two-story and basement residence, 30 by 45 feet, rock-faced Connecticut brownstone; cost $12,000. For David Launder, three-story and basement brick and stone store and flat building, 50 by 74 feet; also three-story and basement flat building, 23 by 65 feet; cost $25,000.

Architects Burling & Whitehouse are preparing plans for H. N. Higinbotham for a three-story residence, 60 by 137 feet, to be built entirely of gray granite, on the corner of Michigan avenue and Twenty-ninth street, tile roof, steam heat, passenger and freight elevators, dumb waiters, conservatory, hardwood finish and tiling; cost $125,000; stable; cost $12,000; granite furnished by the Hallowell Granite Company; Barney & Rodatz, masons. Also letting contracts for terrace work on the Grant monument in Lincoln Park. The granite work is completed.

Architect C. A. Weary reports: For Geo. K. Owsley, two two-story brick and stone flats, 50 by 64 feet, on Robey street, near Adams; cost $10,000; Geo. Lehman & Son, masons; C. J. Collins, carpenter.

Architect O. J. Pierce reports: For Nathan Smith, two-story cellar and attic, brick and brownstone residence, on Monroe street, near Leavitt, slate roof, hot-air heat, closets and bath, stained glass, galvanized iron cornices, hardwood finish, wood or marble mantels, etc.; cost $8,000. For J. Abel, remodeling front and adding stone porch to residence on Vernon avenue; cost $1,500.

Architects Wilson, Marble & Lamson report: For a syndicate, seven-story brick and stone apartment building, 58 by 170 feet, corner of Eighteenth street and Michigan avenue; the building will contain 42 flats, so planned that the suites can be made in any number of rooms, from three to nine each. It will be substantially built of St. Louis pressed brick and St. Lawrence marble, terra-cotta cornices and copper bays; wire lath ceilings and terra-cotta lumber will be used as fireproof protection; building will contain closets and baths, stained glass, skylights, three passenger elevators and a number of freight lifts, waterpower, steam heat, hardwood finish and tiling, electric bells and speaking tubes, wood and tile mantels, electric lights, iron channels, beams, etc., will be used in the construction; cost $225,000. For Levi Cline, two three-story and basement stone front residences, 22 by 70 feet each; cost $11,000. For same, two-story brick residence, 18 by 70 feet; cost $7,000. For Edward Mendel and John F. Finnerty, two three-story and basement stone front residences, 21 by 70 feet each, on Grand Boulevard; cost $11,000 each. For W. J. Moxley, five-story and basement brick and stone factory building, 40 by 100 feet, 63 and 65 West Monroe street; cost $25,000. For George Rapp, three story and basement stone front residence, 22 by 72 feet, on Vernon avenue near Thirty-fifth street; cost $10,500. For J. McDonald, four-story brick and terra-cotta stores and flats, 40 by 65 feet, Van Buren street and Western avenue; cost $9,000. For Mr. Lawrence, two-story and basement brick and stone flat building, 22 feet 6 inches by 62 feet, on Belden avenue; cost $6,000.

Architect John J. Kouhn reports: For the Standard Furniture Company, six-story brick and stone store building, 50 by 125 feet, on West Madison street; also six-story brick and stone flat building, 50 by 75 feet; cost $80,000.

Architects D. S. & A. Pentecost report: For Geo. H. Williams, two-story and attic and basement residence, 30 by 60 feet, 639 West Monroe street. To be built of Anderson special made brick, Lemont stone trimmings. Nat. Cameron, mason; C. Gareau, carpenter. For E. J. Lewis and Paul Dumond, five two-story and cellar brick and stone flats, 24 by 50 feet, corner of Erie and Leavitt streets; cost $2,500 each. For Peter Coffey, two-story and basement brick and stone flat building, 24 by 56 feet, corner of Francisco and Jackson streets; cost $4,700.

Architects M. F. McCarthy & Co. report: For Mr. Carleton, two-story and basement brick and stone residence on Centre avenue; cost $7,000. For Mr. Hirsh, three-story brick and stone store and flats, 22 by 84 feet, on Noble street, Lake View; cost $9,000. On West Lake street, three-story brick and stone store and flat building, 60 by 54 feet; cost $18,000.

Cincinnati, Ohio.—Reported by Mr. Lawrence Mendenhall:

The trade situation has not changed very much; only medium activity. The two disastrous failures in banking circles within the last year, coupled with the uneasiness among the mechanics, have had at least a temporary depressing effect. The building is confined to the erection of houses in the suburbs, large buildings in the city being few. For the month of April the following is the report of the Building Inspector:

CLASS.	NO. OF PERMITS.	VALUE.
Brick and stone	66	$345,865
Wood and frame	83	155,365
Alterations	68	36,890
Moved	2	150
	219	$538,270

Architect S. S. Godley has prepared plans for a two-story frame dwelling on Woodward avenue, Avondale, to cost $5,000, for a Mr. Timberlake; finished plans for a four-story brick and stone store, 18 by 100 feet, for Morris White, to be erected on Sixth, between Vine and Walnut streets; just finished plans for rebuilding the Consolidated Tank Line Company's building at Pearl and Walnut streets. This building will have a front of four stories on Pearl street and five on Walnut; material, brick, iron and stone. He is also making sketches for other work.

Architect Emil G. Rueckert reports himself as moderately busy. He has drawn plans for the following persons: Geo. R. Tepp, a brick residence of nine rooms, hardwood finish, slate roof, with modern improvements; cost $8,000. Henry Brehm, three and one-half stories brick apartment house of fifteen rooms, tin roof, etc.; cost $9,000. Mrs. M. Droesch, a four story brick factory, 40 by 85 feet, with tin roof; cost $10,000. Mr. A. Arnhold, two and one-half story pressed brick addition of four rooms with tin roof; cost $4,000.

Architect Theo. Richter, Jr., reports: For A. Fromme, a pressed brick store and dwelling at Delta Station, city, of three stories, with nine rooms, tin roof; cost $7,500. For F. Pagels, store and flat building, stone front, five stories high, twenty rooms, with a tin roof and slate mansard; cost $15,000.

Architect Geo. W. Rapp leaves in June for an European trip for pleasure, study and health, and expects to be absent about fifteen months. While away he expects to visit the Nile, climb the pyramids, bring back a crocodile or two, and return with his head full of new architectural ideas. John H. Boll, for years his head draftsman, and an able one, too, succeeds to his business. Mr. Boll is a painstaking, capable architect, and although young in years, is old in experience. I know that THE INLAND ARCHITECT will join us in the best wishes for his success, as we wish "George" *un bon voyage*.

Architect Thornton Fitzhugh reports: Making plans for a two-story brick dwelling to be erected on Walnut Hills for Charles Hanks; to cost $8,000; material stock, brick, slate roof and hardwood finish. He is also at work on plans for other buildings.

Architect W. Stanton Robinson reports: Two-and-a-half-story frame dwelling for Jacob Pawalowski, to be located in Ivanhoe; cost $2,500; brick store and dwelling for Edward Lehy, to be erected in Cumminsville; cost $10,500. He recently let contracts for the following buildings: Frame cottage on Price Hill; cost $1,200; two-and-a-half story frame dwelling on Mt. Hope Road, for M. Z. Kerwick; cost $2,500; two-and-a-half-story shingle dwelling for H. Ruhson, Ivanhoe; cost $2,500, and F. D. Lawrence, two-story frame dwelling; cost $2,000.

Architects Buddemeyer & Plympton report the following work: Half timber dwelling for T. B. Stone, Avondale, nine rooms and all modern conveniences; Grand Stand for Carthage Fair Grounds, timber, iron columns and standing tin seam roof; cost $10,000; nine-room dwelling for G. Honshell, Queen Anne style, brick and plaster to be erected in Avondale; eight-room dwelling for E. R. Hall, Bond Hill, Ohio, shingles and plaster gables; residence for James V. Sweetser, thirteen rooms, half timber and shingles, to be erected at Marion, Ind.; cost $8,000; bank building, pressed brick and Bedford limestone trimmings, to be erected at Charleston, W. Va.; cost $50,000; also two frame dwellings for O. E. Miller, city, to contain six rooms each, with bath.

Architect Wm. Martin Aiken has prepared plans for the following persons: Judge Wm. Worthington, brick residence of fifteen rooms, trimmed with kiln-brick stone and slate roof. It is Romanesque in detail, although not much of an attempt has been made to elaborate. One of the features is the octagonal hall in center of house; cost $14,000, A. H. Chatfield, Jr. A block of eight stores three stories high; first story brick, balance half timber work and a driveway in middle of block, by which the rear is reached for shipping purposes. The flats will be very complete, and the frame work will be treated with auto-pyre; cost of block $25,000.

Cleveland, Ohio.—At present the outlook is very encouraging, and some of the architects prophesy that Cleveland will ere long be one of the first in the building procession of the country.

Architects Cramer & Fugman report: For G. E. Home, of Boston, four-story brick and brownstone store, apartment and hall building, 75 by 80 feet; cost $16,000; under way; H. Lindhorst, builder. For A. H. May, three-story brick store building, 40 by 87 feet; cost $6,500; taking figures. For D. L. Diemer, frame cottage; cost $3,000. For Walker & Rogge, three-story brick and stone store building, 40 by 100 feet; cost $10,000; under way; H. Lindhorst, builder. For H. Machke, frame store building, 30 by 72 feet; cost $4,000; under way; C. F. Crouse, builder. For L. W. Heimsath, cottage; cost $3,800; under way; B. Cromell, builder. For Wm. Trinkner, three-story brick store building, 40 by 80 feet; cost $5,800; under way; John Fuelling, builder. For Mrs. Rier, double frame dwelling; cost $3,500; taking figures. For First Baptist Society, stone church, 82 by 130 feet; cost $100,000; J. R. Thomas, architect, New York; Cramer & Fugman, superintendents; D. & G. Griese, builders.

Architects Lehman & Schmitt report: For Dr. A. Hahn, dwelling; cost $3,500; under way. For A. Bandlow, dwelling; cost $3,500. For Peter Flath, double dwelling; cost $6,000. For W. E. Jones, double dwelling; cost $2,500; under way.

Colorado Springs, Col.—Outlook fair, no "boom," but steadily moving business.

Architect Frank T. Lent reports: For W. H. Sanford, two-story and attic frame residence, 38 by 66 feet; cost $12,000; under way; Joseph Dozier, builder. For John De Witt Peltz, two-story and attic frame residence, 36 by 70 feet; cost $12,500; under way; Lewis Whipple, builder. For Colorado City, two and one-half story brick and stone school building, 66 by 70 feet; cost $20,000; receiving bids.

Council Grove, Kan.—Outlook not flattering.

Architect J. H. Leedy reports: For Dr. H. Painter, two-story rame house, 25 by 32 feet; cost $4,000; plans prepared. For W. F. Waller, two-story frame house, 32 by 36 feet; cost $3,000; plans prepared. For Henry Weigam, two-story and basement frame house, 25 by 32 feet; cost $3,500; Joseph Axe, builder.

Creston, Iowa.—Architect W. F. Hackney, of Kansas City, Mo., reports: For Board of Education, two-story brick school building, 60 by 80 feet; cost $20,000; projected.

Dallas, Tex.—The J. B. Legg Architectural Co., of St. Louis, Mo., have prepared plans for a six-story bank building, 50 by 85 feet; granite and pressed and molded brick with terra-cotta and copper trimmings; all modern improvements; cost $50,000.

Denver, Col.—Present condition and outlook very good, but has been somewhat dull for the past few weeks on account of the scarcity of brick. Indications point to great activity this coming summer.

Architects Balcomb & Rice report: For H. J. Stephens, two and one half-story brick and stone residence, 37 by 60 feet; cost $9,000; under way; Hood & Stem, builders. For A. B. Ingols, two and one-half story brick and stone residence, 37 by 50 feet; cost $6,500; under way; J. C. Wheeler & Co., builders. For Conrad Frick, two and one-half story brick and stone residence, 36 by 54 feet; cost $8,500; under way; J. S. Buell, builder. For Mrs. A. E. Epley, two and one-half story brick and stone residence, 34 by 65 feet; cost $8,000; under way; day work. For Wm. C. Miller, one-story and attic brick and stone cottage, 38 by 48 feet; cost $7,000; projected. For C. D. Gurley, two-story brick and stone cottage, 35 by 45 feet, slate roof; cost $6,500; projected. For W. G. Nevin, two-story brick and stone cottage, 32 by 48 feet; cost $5,500; under way; Frank Bayer, builder. For W. H. Mayes, two-story brick and stone dwellings, 75 by 125 feet; cost $23,500; projected. For McCandless & Robinson, three-story brick and stone hotel building, 75 by 140 feet; cost $30,000; projected. For L. Levy, two-story brick stores and flats, 40 by 62 feet; cost $6,500; projected. For D. S. Selover, one-story brick and stone cottage, 33 by 50 feet; cost $4,200; under way; J. Holland, builder. For Geo. H. Higgins, one and one-half story brick and stone cottage, 30 by 45 feet; cost $3,300; under way; Hood & Stem, builders. For T. S. Nettleton, two-story brick and stone double residence, 42 by 51 feet; cost $7,500; projected. For Oliver O. App, two-story brick and stone double residence, 34 by 45 feet; cost $4,000; projected. For Charles Boulter, two-story brick and stone cottage, 28 by 45 feet; cost $3,500; projected. Also four brick and stone cottages for different parties, costing from $3,400 to $3,600.

Detroit, Mich.—The state of building seems unchanged from last month. There is a dullness in the offices as to new work.

Architects Rogers & McFarlane report: For Naomi Brown, two-story brick and stone dwelling, 40 by 60 feet, slate roof; cost $16,000; Topping & Fisher, builders.

Architects M. L. Smith & Son report: For Mrs. Stevens, five-story brick and stone store building, 40 by 60 feet; cost $40,000; Topping & Fisher, builders.

Architects Scott & Co. report: For E. C. Van Husen, two-story brick and stone dwelling, 24 by 50 feet, slate roof; cost $3,500; M. Blay & Son, builders. For C. F. Purdie, two-story brick and stone dwelling, 28 by 45 feet, slate roof; cost $4,000; Henry Carew, builder. Two-story brick and stone dwelling, 25 by 60 feet, slate roof; cost $6,000; Henry Chandler, builder.

Architect Levi Coquard reports: For St. Joachim's Parish, three-story brick and stone school building, 40 by 40 feet, slate roof; cost $20,000; M. Blay & Son, builders.

Architects A. C. Varney & Co. report: For Henry Wetsel, two-story brick and stone dwelling, 40 by 63 feet, slate roof; cost $8,000; F. Schreiber, builder. For Mrs. Cooley, two-story brick and stone dwelling, 25 by 62 feet; cost $12,000; J. Waterfall & Son, builders. For Fred Moran, two-story brick and stone dwelling, 53 by 53 feet; cost $5,200.

Architect J. V. Gearing reports: For N. G. Williams, two-story brick and stone dwelling, 56 by 80 feet, slate roof; cost $15,000; A. Chapton, Jr., builder.

Architect J. V. Smith reports: Two-story brick and stone double dwelling, 45 by 65 feet; cost $10,000; James Deitz, builder.

Architects Meyers & Son report: For Mrs. Lowe, two-story frame dwelling, 30 by 55 feet; cost $3,900; Peter Henderson, builder.

Architect Gordon W. Lloyd reports: For M. L. Smith, three three-story brick and stone dwellings, 41 by 60 feet; cost $11,000; A. Chapton, builder. For W. A. King, two-story brick and stone dwelling, 32 by 56 feet, slate roof; cost $6,400; James Buchanan, builder.

Architect W. G. Malcomson reports: For George Geagan, two-story frame dwelling, 24 by 60 feet; cost $2,000. For James Powell, two-story frame dwelling, 28 by 67 feet; cost $3,000; Thomas Moore, builder.

Architect A. E. French reports: For Paul Rabout, two-story brick and stone dwelling, 24 by 58 feet; cost $3,000; Allen Holmes builder.

Architect Joseph E. Mills reports: For J. H. Johnson, two-story frame dwelling, 25 by 46 feet; cost $2,500

Architects Mason & Rice report: For Patrick Dee, three-story brick and stone dwelling, 22 by 66 feet; cost $5,000.

Architect W. E. Brown reports: For Blake & Son, three-story brick and stone dwelling, 23 by 94 feet; cost $5,000; Mr. Prolo, builder.

Architects Donaldson & Meier report: For the City Park Commissioners, one-story frame boat house, 30 by 250 feet; cost $4,350; Teakle & Golden, builders.

Architect E. W. Arnold reports: For G. W. Johnson, two-story frame dwelling, 25 by 43 feet; cost $2,000.

Architect A. B. Cram reports: For St. John's Parish, two-story brick and stone parish building, 54 by 110 feet; cost $25,000; P. Dee and Spitzen Bros., contractors.

B. Shield is building for C. W. Hausherr, a two-story brick and stone store and barn, 22 by 70 feet; cost $4,500.

Goff Stenton is building a two-story brick and stone double dwelling, 36 by 60 feet; cost $5,000.

Morse, King & Co., are building for M. H. Melvin, a two-story brick and stone store and dwelling, 40 by 68 feet; cost $5,000.

The Huyett & Smith Mfg. Co., are building a three-story brick machine shop, 75 by 45 feet; cost $4,000.

H. W. Holcomb is building for himself two two-story brick and stone dwellings, 27 by 45 feet; cost $8,500. Also a two-story brick and stone dwelling, 27 by 45 feet; cost $5,500.

Messrs. Green & Golder are building a two-story brick and stone double dwelling, 47 by 62 feet; cost $4,500.

Harry Chandler is building for C. E. Bresler a block of six two-story brick and stone stores, 116 by 58 feet; cost $14,000.

T. Fairbairn is building for W. P. Kingsley, a two-story brick and stone foundry, 60 by 120 feet; cost $5,000.

Permits were granted during the month of May for 246 new buildings, to cost $426,645. For 78 alterations, etc; cost $51,263. Total, 324 permits; cost $477,908.

Douglas, Ont.—Architect James R. Bowes, of Ottawa, reports: For Rev. Mr Merion, stone church, 48 by 80 feet; cost $10,500; under way; day work.

Des Moines, Iowa.—Architect Clint Nourse has completed sketches for the proposed combination building for the Y. M. C. A., Chamber of Commerce, and City Library.

Dubuque, Iowa.—Architect F. D. Hyde reports: For W. S. Bradley, three-story brick and terra-cotta store and flat building, 53 by 53 feet; cost $11,000; under way. For Charles Eigheny, remodeling residence; cost $3,500; under way. For J. H. Tice, remodeling residence; cost $2,500; under way.

Evanston, Ill.—Architect S. A. Jennings reports: For Timothy Dwight, two frame dwellings, finished in Georgia pine, furnace and mantels; cost $3,500 and $4,000. For Gen. White, two frame dwellings; cost $3,600, and $4,200. For P. R. Woodford, frame dwelling; cost $3,500. For J. Hebblethwaite, frame dwelling; cost $3,500. For Dr. Duyche, pressed brick veneered residence, all modern improvements; cost $10,000. For Mr. Childs, brick veneered residence; cost $4,000.

Forth Smith, Ark.—General outlook not as good as it was early in the season.

Architects Lee & Roth report: For W. Jacobs, two-story brick and stone store and office building, 30 by 50 feet; cost $4,500; under way; W. S. Bogue, builder. For Chas. Burns, two-story brick and stone store building, 50 by 100 feet; cost $7,100; W. S. Bogue, builder. For R. Bollinger, two-story brick and stone office building, 37 by 90 feet; cost $8,000; contract not let. For New Hope Seminary, Choctaw Nation, additional two-story frame building, 34 by 84 feet, living apartments; cost $5,000; under way; Julius Prufert, builder.

Fort Worth, Tex.—The outlook for the building trades in southwest Texas has never been so good as at present. Everything seems to indicate that a large amount of building will be done this season.

Architect J. J. Kane reports: For W. W. Dunn, four-story brick, stone and iron building, 85 by 40 feet; cost $18,000; under way; Heck & Baker, builders. For J. M. Pears, three-story brick, stone and iron building, 50 by 90 feet; cost $16,225; under way; Tomlinson, contractor. For H. M. Williams, four-story brick, stone and iron building, 50 by 90 feet; receiving bids. For city of Fort Worth, two-story brick, stone and iron building, 25 by 90 feet; cost $8,000; under way; Townsend & Lusher, builders. For Catholic Society, stone church building, 76 by 136 feet, slate roof; cost $75,000; under way; sub contracted. For R. E. Maddox, three-story brick, stone and iron building, 75 by 200 feet; cost $26,000; under way; Heck & Baker, contractors. For Dr. Beall, two-story frame residence, 42 by 76 feet; cost $8,000; under way; Wm. L. Rail, builder. For R. E Maddox, three-story brick, stone and iron building, 50 by 90 feet; cost $14,000; under way; Heck & Baker, contractors. For Hyde Jennings, three-story brick, stone and iron building, 25 by 90 feet; cost $9,000; under way; Townsend & Lusher, builders.

Joliet, Ill.—Present outlook good.

Architect Julian Barnes reports: For George H. Munroe, three-story and basement stone store and office building, 44 by 120 feet; cost $20,000; foundations in. For George Abbott and Joseph Reichmann, three-story and basement pressed brick store and office building, 44 by 80 feet; cost $15,000; contracts let. For John Gray, two-story brick store and tenement, 46 by 60 feet; cost $4,200; under way. For F. Bestwick, two-story and basement stone store and tenement, 44 by 66 feet; cost $4,800; excavating done. For John Anderson and H. Odenthal, two-story and basement brick and stone store and tenement, 66 by 68 feet; cost $9,000; excavating done. For Otis Hardy, two two-story frame residences, 35 by 55 feet; cost $12,000; under roof. For Sanger Steil, two-story frame residence, 34 by 54 feet; cost $6,000; under roof. For S. S. Tyler, two-story frame residence, 34 by 54 feet; cost $5,500; under roof. For George Munroe, two-story pressed brick residence, 38 by 51 feet; cost $6,000. For Joseph Keip, two-story frame residence, 30 by 48 feet; cost $4,000. For Young Men's Christian Association, three-story and basement stone building, 65 by 120 feet; projected. Other work in Joliet amounting to about $14,000. For Snap Bros., Normal Park, nine houses; cost $30,000. For Louis M. Arnold, Peotona, two-story and basement frame residence, 33 by 48 feet; cost $4,500.

Jonesboro, Ark.—The J. B. Legg Architectural Co., of St. Louis, Mo., have prepared plans for S. A. Warner, for a two-story brick and stone residence, 50 by 70 feet, slate roof; all modern improvements; cost $10,000.

Kansas City, Mo.—Architect W. F. Hackney reports: We have no "boom," but a steady increase in building. Permits issued since January 1 amount to over $3,000,000. This does not include building in the suburbs. For James T. Thornton, two-story brick and terra-cotta residence, 52 by 80 feet; cost $30,000; under way; Wm. Harmon, builder. For F. M. Hayward, frame dwelling, 37 by 42 feet; cost $3,000; under way; H. H. Bulton, builder. For Mrs. Stella Bellows, frame dwelling, 37 by 38 feet; cost $2,500. For W F. Hackney, brick and frame residence, 38 by 47 feet; cost $4,500; under way; H. H. Bulton, builder. For John E. Wagner, three-story brick tenement block, 52 by 130 feet; cost $40,000; under way; W. B. Miller, builder. For S. C. Drollinger, three-story brick tenement block, 53 by 134 feet; cost $42,000; under way; T. O. Combs, builder. For I. W. Boutrager, double tenement block, 38 by 130 and 38 by 134 feet; cost $70,000; projected. For Herman Long, four-story "French Flat" building, 96 by 92 feet: cost $75,000; projected. For James T. Thornton, one-story brick store, 25 by 120 feet; cost $3,000; projected.

Architect B. H. Brooks reports: For L. G. A. Copley, three-story brick and stone double dwelling, 45 by 58 feet; cost $15,000; under way; superstructure not let. For W. J. Anderson, two-story brick and terra-cotta double dwelling, 44 by 60 feet; cost $18,000; under way; A. Dymock, builder. For J. E. Elmore, two-story brick and stone dwelling, 45 by 60 feet; cost $12,000; under way; R. W. Vaughan, builder. For Melrose M. E. Society, Brick and stone church, 48 by 78 feet; cost $20,000; foundation under way; superstructure not let. For Immanuel Baptist Society, brick and stone church, 58 by 60 feet; cost $10,000; under way; Wm. Main, builder.

Architect James Oliver Hogg reports: For W. S. Beard, three-story pressed brick office building at Wyandotte; cost $10,000. For Geo. Hoffman, two-story stone and frame residence; cost $6,000. For Henry M. Beardsley, two-story residence; cost $4,000. For school board at Salisbury, Missouri, brick and stone school building; cost $15,000.

Architect F. J. Hart reports: For M. Brogell, three brick and cutstone residences; cost $20,000. For James Goodwin, twelve small brick stores; cost $10,000. For Clark Smith, brick tenement building; cost $12,500. For M. Warren, two-story residence; cost $7,000. For James G. Place, eight brick and stone tenement houses; cost $12,000.

Architects Knox & Guinnotte report: For Patrick Soden, remodeling residence; cost $10,000. For J. K. Guinnotte, brick and stone residence; cost $10,000. For C. J. Cowherd, brick and stone residence; cost $10,000. For Paul Jenkins, brick and stone office building, 50 by 115 feet; cost $40,000. For R. C. Hunt, brick and stone residence; cost $10,000. For J. J. Woodworth, four-story and basement brick and terra-cotta store building; cost $50,000. For J. K. Stark, double brick and stone dwelling; cost $15,000. For E. W. Dowden, four two-story brick and stone stores; cost $15,000. For Peter Soden, brick and stone residence; cost $15,000. For Commercial Bank, three-story brownstone building; cost $15,000.

Among the building permits recently issued are the following, which contemplate an expenditure of $5,000 or more: B. A. Wilson, excavation for block of ten houses, 230 by 40 feet; cost $5,000. C. A. Wilson, excavation for block of ten houses; cost $5,000. J. P. Jackson, two-story brick residence, 44 by 76 feet; cost $35,000. Emma W. Moulton, two three-story brick residences, 47 by 75 feet; cost $12,500. James Cotter, three-story business block, 25 by 50 feet; cost $9,000. Warren & Riddington, fifteen frame dwellings, 24 by 42 feet each; cost $33,600. G. A. Heflin, two frame dwellings, 27 by 44 feet; cost $7,000. S. C. Drollinger, block of six two and three-story business buildings, 132 by 48 feet; cost $30,000. W. H. Bartell, two three-story brick residences, 44 by 70 feet; cost $18,000. Stumpf & Peltzer, block of four brick residences, 84 by 108 feet; cost $12,000. A. J. Hedrick, block of four two-story frame dwellings, 24 by 48 feet each; cost $8,000. Smith & Cauch, block of four three-story brick residences, 142 by 32 feet; cost $24,000. W. C. Scarritt, two-story stone residence, 51 by 64 feet; cost $30,000. Long Bros., four-story brick and stone business building, 135 by 86 feet; cost $100,000. Commercial Bank, three-story brick building, 25 by 74 feet; cost $16,000. George Joffe, two story brick business block, 60 by 30 feet; cost $18,000. S. C. Douglass, two-story brick residence, 55 by 70 feet; cost $35,000. Ridge & Denny, five-story brick business building, 142 by 50 feet; cost $70,000. J. F. Marks, two two-story brick residences, 30 by 51 feet; cost $10,000. Ira J. Woodworth, two-story brick business building, 60 by 120 feet; cost $18,000. F. P. Wilson, two brick residences; cost $5,000. Mrs. Ella Adams, two brick residences, 42 by 57 feet; cost $15,000. W. D. Godkins, three-story brick building, 56 by 43 feet; cost $10,000. Independence avenue Methodist Church, two-story building; cost $9,000.

The Cotter & Dugan building is to be pushed rapidly. It will be a six-story building, built of brownstone and pressed brick, having a frontage of 125 feet on Main street, between Twelfth and Thirteenth; cost $100,000.

Knoxville, Tenn.—Buildings small and operations rather slow this season.

Architects Baumann Bros. report: For F. H. McClung, two-story frame residence, 45 by 60 feet, slate roof; cost $9,000; under way; James A. Galyon, builder. For R. A. Arthur, two-story brick store and flats, 48 by 100 feet; cost $8,000; making plans. For Joseph Schneider, two-story brick stores and flats, 50 by 60 feet; cost $7,000; making plans. For J. F. Haupt, two-story brick stores and flats, 42 by 60 feet; cost $7,500; under way; James A. Galyon, builder. For Dr. S. B. Boyd, three-story brick stores and flats, 40 by 43 feet; cost $6,500; under way; James A. Galyon, builder. For P. N. Hewen, two-story frame dwelling, 42 by 65 feet; cost $4,000; under way; McLemore & Chenoweth, builders. For N. S. Woodward, two-story frame dwelling, 48 by 60 feet; cost $6,000; making plans. For Thos. J. Peed, two-story frame dwelling, 35 by 57 feet; cost $4,000; making plans. For Jos. Knaffel, two-story brick dwelling, 28 by 60 feet, slate roof; cost $6,000; making plans. For E. E. McMillan, two-story frame dwelling, 38 by 67 feet; slate roof; cost $7,000; under way; Cooley Bros., builders. For W. B Lockett, three-story brick store building, 26 by 141 feet; cost $9,000; under way; W. H. Dawn, builder. Also a number of less important dwellings projected and under way.

Lawrence, Kan.—Architect John Wees, of St. Louis, Mo., has prepared plans for E. F. Pierson for a two-story brick, stone and frame residence, 35 by 55 feet; cost $5,500.

Leavenworth, Kan.—Architect E. T. Carr has prepared plans for a $12,000 library building to be erected for the Soldiers' Home.

Marietta, Ga.—Architects Bruce & Morgan, of Atlanta: For H. L. Welch, two-story frame residence, 50 by 74 feet; all modern improvements; cost $5,000; contracts not let.

Medicine Lodge, Kan.—Architect C. W. Terry, of Wichita, reports: For the School Board, two story and basement brick and stone schoolhouse, 64 by 86 feet; cost $16,000; contract not let.

Memphis, Tenn.—Present condition not good; outlook not favorable. No large buildings going up, and none projected that are known of.

Architects Martin & Chamberlin report: For Medical College, two-story brick building, 50 by 90 feet; cost $15,000; contracts let June 10. School building, two-story brick, 40 by 62 feet; cost $15,000; contracts let June 1. For W. L. Parker, two-story frame dwelling, 25 by 60 feet; cost $3,500; W. H. Walker, builder. For J. M. Brinkley, two-story frame dwelling, 30 by 60 feet; cost $3,900. For Mr. Everman, two-story brick addition; cost $3,750. For Idlewild Land Company, fifty frame dwellings; cost $150,000; contracts to be let July 1.

Milwaukee, Wis.—Architects Leipold & Lesser report: For Mrs. M. A. Owen, two-story brick veneer dwelling, 30 by 65 feet; cost $8,500; H. Filter & Co., builders. For Adam Pleirs, two-story brick veneered store and dwelling, 25 by 60 feet; cost $4,500. For Ulrich Deruehl, two-story frame dwelling, 26 by 50 feet; cost $4,000. For Frank Mueller, two-story and basement frame and stone building, 28 by 60 feet; cost $4,000. For August Schmidt, two-story brick store building, 25 by 70 feet; cost $6,000. For Mrs. Eliza Patten, two-story frame building in Lake City, Minn.; cost $4,500. For the Milwaukee Casket Co., four-story frame and iron factory building, 60 by 60 feet; cost $5,000. For Geo. Weinhagler, two-story brick veneered building, 34 by 68 feet; cost $6,000. For Wm. Millard, three-story brick store building, 25 by 68 feet; cost $7,500. For G. B. Van Pelt, two-story frame building, 38 by 60 feet; cost $8,000. For August Pritzlaff, two-story frame building, 26 by 50 feet; cost $4,000. For Chas. L. Schan, brick veneered store building, 28 by 65 feet; cost $4,800. For Anton Ledigo, brick store and flat building, 28 by 78 feet; cost $8,500. For Toepfer & Sons, brick warehouse, 48 by 68 feet; cost $5,000. Also a number of buildings, costing less than $4,000 each.

Minneapolis, Minn.—Architects Orff Bros. report: For C. Noch, three-story brick business building; cost $10,000.

Architect C. C. Yost reports: For Col. Lowry and others, frame opera house and pleasure garden, at Lake Harriett; main building, 325 by 80 feet, seating capacity of opera house 1,500; cost $50,000.

Architect Harry W. Jones reports: For National Bank of Commerce, eight-story brick and stone bank building; cost $200,000.

New Castle, Pa.—Architect S. W. Foulk reports: For Pearson Bros., three-story brick, stone and terra-cotta store and office building, 42 by 85 feet; slate roof, steam heat; cost $18,000.

New Corporations.—The Champion Fire Proofing and Insulating Company, Chicago, Ill.; capital stock $150,000; to manufacture insulating materials; incorporators, B. F. Voute, J. F. Marshall and S. Schupp. The Carnegie Iron Mining & Manufacturing Company, of Chicago; capital, $300,000; to develop certain iron and coal mines in the State of Georgia, and to manufacture and deal in iron and lumber for building purposes; incorporators, C. J. Becker, W. Yager, D. T. Bagley and I. Ackerman.

Newton, Kan.—Architect W. F. Hackney, of Kansas City, Mo., reports: For Board of Education, two-story brick school building, 75 by 112 feet; cost $28,600; Gordon & Parks, contractors. For same, two-story brick school building, 66 by 126 feet; cost $26,900; Gordon & Parks, contractors.

Newton, Ont.—Architect James R. Bowes, of Ottawa, reports: For Rev. I. Leahy, stone church, 40 by 90 feet; cost $12,000; under way; day work.

Omaha, Neb.—Architects Mendelssohn, Fisher & Lawrie report: For Mrs. J. B. Graff, two-story frame cottage, Kountze Place, Omaha; cost $3,000. For Danish Association, four-story and basement brick store and society building; cost $50,000. For J. F. Sheely, five-story and basement brick office and store building; cost $100,000. For American City Water Works Company, a four-story stone pumping station at Florence, Neb.; cost $100,000. For S. L. Wiley, Omaha, two-story stone, brick and frame residence at Walnut Hill; cost $25,000. For Trinity M. E. Church Society, Omaha, frame church, Kountze Place; cost $18,000. For Third Congregational Church Society, Omaha, brick church at Kountze Place; cost $15,000. For Mead State Bank, York, Neb., two-story and basement stone bank building at York, Neb.; cost $12,000. For J. H. Jerome, York, Neb., two-story stone store building; cost $12,000. For Dr. McCrea, two-story frame residence, Kountze Place, Omaha; cost $4,000. For Ole Oleson, two-story brick residence, Kountze Place, Omaha; cost $15,000. For Omaha National Bank, addition and alterations to five-story brick bank building; cost $40,000. For S. Reichenberg, two-story frame residence, South Eighteenth street, Omaha; cost $4,000. For W. T. Reaser, Fairmount, Neb., two-story brick store and flat building; cost $18,000. For Episcopal Society of Beatrice, Neb., stone church edifice, to cost $30,000. For University of Nebraska, Grant Memorial Hall (armory) at Lincoln, Neb., to cost $30,000. For Knights of Pythias, Omaha, five-story stone Castle Hall and office building; cost $190,000. For John Withnell, Omaha, two-story frame residence, West Farnam street; cost $12,000. For Max Meyer, Omaha, two-story frame residence, Twenty-fourth and Harney streets; cost $15,000. For Max Meyer, Omaha, two-story frame stable, Twenty-fourth and Harney streets; cost $3,000. For F. V. Wasserman, two-story frame residence, Thirty-sixth and Burt streets, Omaha; cost $6,500. For J. C. Watson, Nebraska city, Neb., frame cottage; cost $2,000. For Mrs. Kate Webster, Chicago, Ill., three-story brick residence at Chicago; cost $5,000. For Hon. A. S. Paddock, Beatrice, Neb., three-story hotel and opera house; cost $125,000. For Sisters of Convent of Mercy, Omaha, three-story brick convent building; cost $75,000. For R. Stevens & Son, Omaha, two-story frame residence; cost $6,000; For R. Stevens & Son, two-story frame residence; cost $4,500. For Lew Hill, Omaha, two-story brick addition to store building, Fifteenth and Douglass streets; cost $10,000. For Young Men's Christian Association, four-story stone building; cost $90,000. For Z. B. Berlin, frame residence, Kountze Place, Omaha; cost $4,500. For Erastus A. Benson, frame residence, Benson Place, Omaha; cost $12,000. For Dr. V. H. Coffman, three two-story brick houses, Jackson street, Omaha; cost $18,000. For Gen. J. C. Cowin, two-story brick stable, South Tenth street, Omaha; cost $3,500. For J. H. Evans, two-story brick stable, South Eighteenth street, Omaha; cost $10,000. For Geo. L. Fisher, two-story frame residence, Kountze Place, Omaha; cost $5,500. For John Grant, two-story frame residence, Park avenue, Omaha; cost $6,000. For Messrs. Hull & Sherman, frame residence, Kountze Place, Omaha; cost $3,500. For Farmers and Merchants' Bank, Red Cloud, Neb, two-story and basement store and brick bank building; cost $16,000. For Dr. Fred Swartzlander, six three-story brick flats, Twenty-sixth and Capitol avenue, Omaha; cost $40,000. For Albert Swartzlander, two-story frame residence, Twenty-second and Webster streets, Omaha; cost $5,000. For E. L. Stone, two-story frame residence, Thirty-second and Farnam streets, Omaha; cost $18,000. For H. B. St. John, two-story frame residence, Kountze Place, Omaha; cost $4,500. For T. Snihold, two-story frame stores and flats, Omaha; cost $6,000. For G. W. Smith, four-story and basement, stone store building, South Sixteenth street, Omaha; cost, $50,000. For Henry Hornberger, three-story brick addition to store building, Douglass street, Omaha;

(*Continued on page XIV.*)